Meaning, equality and overpopulation
Assessing three worries about ageing enhancement

Davies, Benjamin Thomas

Awarding institution:
King's College London

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By

Ben Davies, King's College London

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Abstract

The idea of life extension through bio-medical intervention in the ageing process (ageing enhancement) provokes excitement and concern in equal measure, both among the public and in academic discussion. This thesis addresses three common concerns that arise in discussions of ageing enhancement. The first is the worry that either the pursuit or experience of ageing enhancement will undermine various resources that are necessary to giving our lives value or meaning. The second worry is that such interventions violate requirements of egalitarian justice; the primary way of expressing this concern notes that ageing enhancement is by definition aimed at benefitting the elderly, and argues that egalitarian considerations demand either that we direct such resources at the young, or place significant restrictions on access to medical treatments for elderly people. Finally, the third worry is that successful ageing enhancement will cause unacceptable overpopulation, because the associated increases in the number of people, and their associated consumption, cannot be permissibly ameliorated by other policies. The conclusion from proponents of these concerns is that the state should not support research into or implementation of ageing enhancement, and perhaps should place restrictions on ageing enhancement should it become available.

The thesis places these concerns in a broader philosophical context to specify their strongest form, and to consider responses to those strongest versions. It also relates the three worries to practical considerations of feasibility; it is not enough for proponents to outline an ethically acceptable mechanism for meeting the three worries if these mechanisms are unlikely to emerge. I argue that although none of the three worries rules out ageing enhancement in principle, the latter two are sufficiently well grounded in their strongest versions, to place ethical constraints on permissible ways of engaging in ageing enhancement.

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Introduction

Attempts to control the ageing process through some form of enhancement are not novel as a philosophical concern. However, their place as a live question in public discussion has grown in prominence during recent years, with greater media attention following the entry of globally recognised brands such as Google (through its subsidiary Calico), and eye-catching prize money like the Palo Alto Longevity Prize into the endeavour. Recent experimentation shows that currently available pharmaceuticals reduce senescence in mice quickly and significantly (Zhu et al, Forthcoming). As Ehni (2012: 226) notes, other methods have also been effective in species including nematode worms, fruit flies and mice. He cites caloric restriction, genetic manipulation, and evolutionary strategies (e.g. Rose, 2008), though is more sceptical about other methods such as anti-oxidants (see also Butler et al, 2000); stem cell research; and hormone treatments (see also Olshansky et al, 2002).[1] De Grey (e.g. 2004a) recommends a multi-strand 'engineering' approach to repairing accumulated damage. Summarising this research, Sethe and de Magalhães (2012: 176) suggest that "although the essence of the basic process of aging remains contentious, there are many technical possibilities for how aging might be slowed."

Physical ageing can involve a great deal of pain, unhappiness, and significantly increased chance of death,[2] and the idea of extending healthy lifespan is attractive to many people. But the idea of anti-ageing technology, which in this thesis I call 'ageing enhancement', raises a number of concerns related to how such interventions will upset our mutual co-existence in society. This thesis considers those concerns, grouped into broad three categories: the Meaning Objection, the Egalitarian Objection, and the Overpopulation Objection. Each of these objections appears repeatedly in the existent philosophical literature; from my own (admittedly limited) anecdotal experience, they are also the three concerns raised most frequently by non-philosophers.

The first aim of the thesis is to consider the most philosophically rigorous versions of the three objections, connecting them to the broader philosophical literature beyond the discussion of ageing enhancement, and indeed beyond bioethics. With that in mind, I will briefly outline what I take to be the mutual target of the three objections.

For the sake of simplicity I consider only possible interventions that affect the individual treated, i.e. I will ignore the possibility that we might engage in genetic interventions that would mean future generations were born with extended life expectancy. It is also important to consider the possible effectiveness of ageing enhancement, as this will determine the results on which the objections rest. Ehni outlines three broad possibilities. Ageing enhancement may not extend the lifespan, but instead may lead to 'compression of morbidity', i.e. a decrease of the

[1] For further discussion, see Olshansky et al (2006); Butler et al (2008) and de Magalhães et al (2012).

[2] Indeed, Maynard Smith *defines* ageing as "a progressive, generalised impairment of function resulting in an increasing probability of death" (cited in Kirkwood, 1999: 35).

absolute and proportional amount of our lifetime that we suffer frailness and ill health due to physical ageing.[3] The second possibility is a moderate increase in lifespan. Olshansky et al (2006) suggest that we might see a seven-year increase in lifespan, and a similar slowing of the ageing process, over the next 40-50 years. Finally, the boldest predictions consider the possibility of 'ending ageing' or 'negligible senescence', with de Grey (e.g. 2004a) predicting potential lifespans of 1000 years. Clearly, this would have considerable implications for how we organise society.[4]

I will predominantly discuss the three objections without specifying the effectiveness of ageing enhancement, although where appropriate I consider the implications of different levels of effectiveness. It is worth saying something briefly in defence of considering the possibility of negligible senescence, since de Grey's predictions (as its most high-profile proponent) have come under considerable criticism from many gerontologists on the grounds that his suggested mechanisms are pseudoscientific (e.g. Estep et al, 2006),[5] while Capitaine and Pennings, 2012: 255) suggest that de Grey's prediction would require that we "repair an insurmountable amount of damage", and are thus unfeasible.[6] On the other hand, some gerontologists accept that ageing is in principle controllable in the way de Grey predicts e.g. de Magalhães (2014) – although he is doubtful about de Grey's timetable; Finch (2009); and Rose (2008) – although he is sceptical about de Grey's methodological focus. If such outcomes are possible from research into ageing enhancement ethical assessment ought to consider the implications. If they are morally unacceptable while less effective outcomes are morally permissible, that gives us some guidance in how to conduct research.

Finally, the central normative issue I address is how the state and other institutions should approach ageing enhancement, rather than how individuals should react. As such, I will generally assume that the state will have some degree of control over access. I thus take the three objections to claim that the state should not support research into ageing enhancement, and that it should not be included in state-funded healthcare, insurance schemes, and the like. Of course, if the state does abstain from such activity, a possible stronger conclusion is that it should also ban private research into ageing enhancement, and prevent individuals from accessing any resultant treatment with their own resources. Since I argue that, given certain conditions, the state should support ageing enhancement, I do not give much consideration to

[3] See e.g. Fried (1980) on 'compression of morbidity' and 'compression of senescence'.

[4] Capitaine and Pennings (2012: 254) suggest a fourth result of 'prolonged senescence', which would represent "the failure of the anti-aging research enterprise: life itself is prolonged, while the healthspan is not". I will not directly consider this possibility, as it simply represents the prospect of failure that is imminent in any research project.

[5] De Grey (2006) offers a rebuttal.

[6] This seems to presuppose a 'cumulative damage' theory of ageing, which Rose (op cit) criticises.

this latter question; but I do address it in places where I consider the possibility that the requisite conditions will not be met, particularly in Section 6.4, and Chapters 7 and 8.

That concludes my sketch of the target, and so the first aim of the thesis. The second aim is to sketch a middle path through a polarised debate. While I will argue that none of the three objections considered gives conclusive reasons to oppose ageing enhancement, I will suggest that some of the issues they raise should shape how we think of ageing enhancement in the real world: how we should regard it, implement it, and prepare for it, and where it should lie in our priorities. Key to this approach is the idea that ageing enhancement must be permissible not just in principle, but in practice; the question is not whether we could in principle solve the problems raised by opponents, but whether we will.

Chapters 1 and 2 assess the Meaning Objection. Chapter 1 addresses accounts from Callahan (1995) and Kass (2001) about the place of ageing and death in the ability of elderly people to live meaningful lives. I argue that the theory of meaning outlined by each author is subject to considerable objections, and outline a more flexible theory of meaning that does not require a place for either ageing or death at a particular time, and which allows us to face up to our mortality with more than the passive acceptance that Callahan and Kass promote.

Chapter 2 outlines a more contemporary concern from Agar (2010), who worries that truly radical ageing enhancement will change our personalities considerably, such that we will lose touch with what we currently value. While accepting the force of Agar's axiological conservatism, I insist that his worries about ageing enhancement are implausible given other facts about human psychology. I conclude from these two chapters that while ageing enhancement might require some of us to reassess what we care about, this does not constitute a strong objection to enhancement.

Chapters 3-6 focus on the Egalitarian Objection. I flesh out this objection by relating it to discussions in the broader philosophical literature, suggesting that some egalitarian considerations lend support to ageing enhancement. While I acknowledge that egalitarian principles should constrain our behaviour around enhancement, I reject the objection's implication that this can be linked straightforwardly to numerical age. Chapter 3 outlines the various options that form the egalitarian field (equalitarianism, prioritarianism, and sufficientarianism) and argues that egalitarianism cannot only be applied across lifetimes, but must also be considered at particular times. I consider and reject two Rawlsian accounts that challenge this view by making our time-relative concerns derivative on our lifetime concerns.

If egalitarian principles apply both at lifetimes and in a time-relative way, we need some sense of which principles to apply at each level, and how they fit together. Chapter 4 suggests that only a sufficientarian time-relative principle can explain our apparently conflicting concerns with hardship, responsibility and compensation in egalitarian justice. Having outlined a sufficientarian view based on the idea of protecting a tolerable existence, I suggest that this

lends *prima facie* support to ageing enhancement. However, this support is clearly vulnerable if certain lifetime principles are chosen. Chapter 5 repeats the task of the previous chapter at the level of lifetimes, rejecting certain substantive versions of the Egalitarian Objection as based on inferior lifetime principles, before defending a prioritarian view.

Chapter 6 then considers how these principles fit together, since at least one natural understanding – that lifetime priority should form a tie-breaker for people at equal momentary levels – seems to support the Egalitarian Objection. While the idea of using lifetime priority as a tie-breaker works in some circumstances, it should not be so used where the tie to be broken will result in someone falling irremediably below the tolerability threshold. However, I suggest that any significant role for lifetime priority raises questions about the egalitarian credentials of ageing enhancement, not because it will benefit the elderly, but because it may only benefit the best off in society. I consider the practical implications of this concern, including around the role of healthcare allocations for reparative justice, and suggest that the most plausible egalitarian concern about ageing enhancement will be about the relative priority it takes either in public or private spending if it will largely benefit the best off.

The final two chapters address the Overpopulation Objection. Chapter 7 outlines the objection and considers several versions of a common response from proponents of ageing enhancement, that if we are concerned about overpopulation we should look to reproduction rather than curbing access to life-extending interventions. I suggest ethical constraints on a plausible programme of incentives to reduce reproduction, as well as some pragmatic concerns for the principles that meet those constraints, which show an appeal to reproductive control to be considerably more complex than it appears. However, similar ethical constraints block a straightforward move to the Overpopulation Objection's conclusion that we should not engage in ageing enhancement.

Chapter 8 considers the idea of overpopulation in greater detail, roughly following Ord's (2014) distinction between hard and soft limits on population size. If ageing enhancement would bring about soft limits – limits that demand considerable changes in our behaviour that are both feasible and morally permissible – then the right thing to do is to reduce consumption. However, if ageing enhancement would require significant changes in our consumption, there is a risk that we will pursue enhancement without making those necessary changes. Since this risk most threatens those who are least likely to benefit from ageing enhancement, it places some further ethical constraints on how, and under what conditions, we should pursue ageing enhancement; however, these constraints are not sufficient to warrant an automatic block on ageing enhancement research or application.

Chapter 1: The Meaning Objection – Age, death and meaning

The first concern I consider suggests that ageing enhancement, and perhaps even just its pursuit, threatens our ability to live meaningful lives. The arguments considered in this chapter contend that we must accept either physical ageing or death at a certain point in order to have a meaningful life, and that ageing enhancement would undermine that ability; the argument assessed in Chapter 2 proposes that radical ageing enhancement will undermine certain attachments that are central to our lives being meaningful in a way we can currently relate to.

I will argue that the concerns outlined in this chapter are unconvincing. This is not to deny that death or ageing might take a central place in a meaningful life for some people. But if we are to reject ageing enhancement on the grounds of its impact on meaning, opponents must either show that certain attitudes to ageing or death play an irreplaceable role in giving life meaning, or that we can dismiss the concerns of those for whom they do not play such a role, and who would benefit from enhancement.

Section 1.1 discusses the idea of meaning, and draws a distinction between two ways of conceiving of a meaningful life. Section 1.2 considers Callahan's view that elderly people need a socially-specified role to give their lives meaning, and that this role involves them accepting death past a certain point in life because they should focus on the next generation (1.2.1). Section 1.3 criticises Callahan's claim that elderly individuals need roles that specifically reference their age, and Section 1.4 considers some difficulties in developing the consensus on the meaning of old age that seems necessary for this project.

Section 1.5 turns to Kass's view that the physical frailty and suffering involved in ageing can prepare us for death, considering some ways of understanding the idea of emotional appropriateness (1.5.1) and whether acceptance is the only way for mortality to have a place in a meaningful life (1.5.2). I argue that this idea has its priorities wrong, and ignores the possibility that negative attitudes to death may be appropriate and useful even at the end of life.

1.1 The idea of meaning

It may be helpful to have a formalised argument that summarises the Meaning Objection, at least approximately, covering the three versions that I consider in Chapters 1 and 2:

P1 Ageing enhancement threatens some part of our current way of life that makes our lives meaningful.

P2 A life without meaning is significantly diminished in such a way that it is unlikely that we could make up for that loss simply by acquiring greater amounts of some other goods.

P3 So we should not accept the sacrifice of meaning only for more of other goods we already enjoy.

P4 Ageing enhancement will only give us more of what we already have.

C1 There are strong prudential reasons not to pursue ageing enhancement.

P5 Governments should not support medical interventions that are not good for their citizens, and perhaps should place some restrictions on them.

C2 There are strong moral reasons for governments not to support (or, more strongly, to restrict) ageing enhancement

In general, the next two chapters will consider and argue against various versions of P1. One might raise doubts about several of the other premises, but P1 seems to me both fundamental to the argument, and clearly wrong in the cases I consider. In Callahan's version of this argument, with which I begin, P1 refers to a particular role for elderly people in contemporary society.

One way of thinking about the meaningful life is to view it as akin to a shopping list: once you have ticked off all the items (career; parenthood; milk), there is no point hanging around in the aisles. This view assumes that life should conform to a predefined shape that lends prospective purpose to action; a subset of this idea sees different 'life-stages' as both inevitable for everyone, and involving uniquely appropriate activities. Such a view can tolerate diversity by ascribing a range of appropriate activities to particular life stages, but it cannot tolerate too much divergence from the list. An alternative conception sees meaning in life not as a pre-conceived list to be discovered, but as something to be developed by the individual, using the social and personal resources available to them. This is clearly a rather looser idea of meaning, and some worry that its lack of external reference renders it ultimately arbitrary. I will consider this idea in Section 1.3.

Although there are some who consider death the greatest possible evil – de Unamuno claimed not to fear hell, since "nothing appeared to me quite so horrible as nothingness itself" (1921: 9) – common opinion assumes a quality of life below which it is not worth living such that the claim that more life is good for a person refers only to a life 'free enough' from the most unpleasant possibilities of existence. This raises the question of what those possibilities are. Physical pain is an obvious candidate, but people also have psychological and emotional boundaries beyond which life no longer seems worthwhile, even given continued physical health.

One extension of this idea found in Williams (1973) is that life without certain boundaries, including the boundaries set by mortality, might become meaningless. Williams imagines an immortal woman, Elena Makropulos, who comes to find that nothing holds any attachment for her, and she grows withdrawn from the world and life itself. Elena's immortality may make her seem so far beyond our experience that it is hard to believe we could relate to her condition. But Williams suggests that Elena has an "almost perceptual" realisation that there is something

missing in her relation to the world; that there is nothing in the world which, from her perspective, grabs her emotionally and presents itself as worth caring about. Williams seems to think that this is an inevitable condition of her immortality.

I want to suggest that Elena spots something rather less novel. As Williams acknowledges, her problem is that the world alone cannot provide our meaning. This brings Elena sharply back within our boundaries. Nothing happens to her to make her life 'meaningless'; but she loses her internal resources to engage with the world in a way that generates meaning, because she engages in the activities that keep the rest of us satisfied to such a degree of repetition that they lose all subjective meaning for her, revealing them as objectively vacuous. But while Williams assumes that something special happens to Elena to make her see her life as meaningless, the alternative is that she merely realises that the kind of meaning she has been searching for – one given unbidden by the world that the agent cannot refuse – is unavailable at any age.

One possible reaction to this realisation is Elena's; she ends her life since the world offers no reason to persevere. Another possibility is to deny that meaning requires an objective relation with the environment, and to insist instead that it is generable. To find meaning in this sense is not to discover an objective fact about our purpose. Rather it involves confronting and making sense of some elements of one's life, in such a way as to give answer to a potential question. The question is not so much the 'Why am I here?' of objective meaning (to which the answer is either causal or 'No reason'), as 'What can I make of this?' But meaning-generation requires both internal and social resources. It is a dearth of the latter that grounds Callahan's worry that endless pursuit of life-extension for elderly people undermines their ability to live meaningful lives.[7]

1.2 Knowing their place

Callahan worries that a contemporary focus on individual liberty has eroded the social resources that help individuals make sense of old age, leaving nothing in their place (1995: 60). He argues that a meaningful life has a particular shape, with natural limits; indefinite attempts to breach those limits will rob elderly people of meaning (35-36). According to this account, meaning involves specific roles for older members of society, the primary of which is service to younger generations (43), which includes knowing when to die rather than use up medical resources.

In Callahan's view, modern society uniquely fails to provide meaning for its elderly members because of our refusal to accept that there is anything special about old age, whereas "the elderly were often granted a high status in earlier, more traditional societies because of the belief that age carried with it not only wisdom, but a privileged ability to interpret the moral traditions of a society" (37). The implication is that earlier societies appreciated something we now miss: that

[7] Callahan's target is not so much ageing enhancement as life-extending healthcare in general. But the form of his argument transfers easily to ageing enhancement, and I will write as if it were his target.

elderly people have certain qualities *because of their age*, and that we cannot give them their due if we fail to respond to these qualities; but these same qualities mean that there are certain proper ways for the elderly to live, which excludes the pursuit of life extension.

This is doubtful as a generalised claim about the past,[8] and Callahan offers no examples, but I will assume that he has specific societies in mind, and the evidence to back up his claim. The idea that age entails the possession of certain qualities is a stereotype of considerable influence. One also finds such unsupported caricature in writings that reject health rationing: Kilner challenges the assumption that younger lives are obviously worth more by noting that Kenya's Akamba often prefer an elderly to a young man for a hypothetical life-extending treatment, since the former "is a father to many people". Kilner then claims that although rarely true in our society, this claim "evokes a broader thought. The old man is a leader, a wise counsellor, and an inspiring figure worthy of respect." (1992: 189)

'The' old man is none of these things, as there is no such individual. Take wisdom, claimed for elderly people by both Callahan and Kilner. While age affords time to learn and reflect, some people do not engage in reflection, and time often cements existing prejudice. Kirkwood notes that it may make sense to ascribe wisdom to old people "just because they are old...when getting to be old is a rare occurrence" (1999: 4). In such societies, age may reflect canniness in having outlasted one's peers (although it might equally involve luck and privilege). But, he adds, in a society where many reach old age, it would be naive to think that wisdom was a necessary or even likely component of lasting so long. Modern societies may also undercut the supposed wisdom of elderly people through the speed of social change. In static societies, one could reasonably suppose that the situations confronted by young people are similar to those their grandparents confronted at the same age. In societies where social patterns and norms change rapidly, this is less likely.[9]

1.2.1 Taking age seriously

Callahan claims that we value elderly people as consumers, voters, volunteers, and sources of "funds, family anecdotes, and occasional baby-sitting", but that none of these roles value "their age *as such*" (1995: 37-38). I assume these examples are supposed to support the need for an age-specific role for older people; the implication is that contemporary liberal society only values elderly people if we can make use of them, i.e. in ways that do not offer them resources for meaning. Yet there are age-neutral ways of valuing elderly people that do not involve such cynicism, including most of the roles Callahan lists. Being valued as a voter is, ideally, to have

[8] For instance the "status of an old person in the [ancient] Roman world depended more on the person him or herself than on the general fact that he was or she was old" (Parkin, 2003: 34). It does not follow from the fact that a society venerated *some* elderly people that elderly people generally received such treatment.

[9] See also Keizer (2012).

one's opinions and interests matter, while family membership bears no necessary reference to age.

Callahan thus needs further reasons why elderly people require society to value their age 'as such'. One explanation comes in the comment that the features he lists are those in which older people "resemble younger age groups" (38). Perhaps the worry is that this implies the paradigm for meaningful living comes from youth, with elderly people being assessed for how well they can ape others. But this relies on the unfounded assumption that we value certain features because they are possessed by young people. We could instead say that older people derive meaning from certain roles, including the ones Callahan lists, and that some of those roles are available regardless of age. There is no need to assume that young people provide the paradigm of the voter, volunteer, family member or indeed the consumer. If they do, this may be a reason to re-examine our conceptions of these roles as age-relative, rather than searching for different roles for elderly people.

Another explanation is that elderly people are the only age cohort who are "dispensable" in modern society (36), and so require a special role that makes them indispensable again. By implication, it is because age makes elderly people uniquely dispensable that their role must respond to age. But even if we grant the doubtful idea that all individuals require indispensability, this does not follow. We would need to assume that a solution must respond to the very factor that caused its concomitant problem. Even if elderly people are dispensable because of age, all they require according to this argument is indispensability. If an elderly person finds meaning in volunteering work, and becomes genuinely indispensable in the lives of those he helps, then if dispensability *per se* is the problem, it cannot matter that his role is not age-specific.

Perhaps we should interpret dispensability differently, as applying not to individuals but age groups. For an age group to be indispensable, they must have a role that involves their age as such because otherwise other age groups could fill in for them, making them dispensable. Callahan would need to show that other age groups are indispensable, or there would be no special problem for old age. I doubt that this is true for non-elderly (whom Callahan calls "mature") adults, for whom Callahan cites two roles: procreation and "managing" society (43). If his argument is to work, these roles must be

(1) inaccessible to elderly people, since an age group cannot be indispensable in a role that is open to another age group; and
(2) necessary components of meaning for all mature adults. Otherwise it would be unclear what role group indispensability plays in individual meaning.

Many elderly people are capable of contributing to social management. Since some elderly adults are capable of helping to run society, social coordination does not respect mature adults'

age 'as such'. This role fails to meet requirement (1), and does not make mature adults indispensable.

People certainly lose their reproductive capacity with age, so reproduction is (depending on how we define old age) perhaps more plausibly closed off to elderly people. However, many mature adults choose to remain childless, adopt or foster, while others are simply unable to have biological children, all seemingly without threatening the meaningfulness of their lives. So it cannot be that procreation makes every mature adult indispensable, or that it is a necessary component of an individually meaningful life. One response to this is to claim that mature adults are indispensable for their procreative activity as a group, even if individuals do not contribute to this role. Yet this fails requirement (2); how does the meaning I attach to my life derive from the fact that people of my age are having children? What possible relevance could that have for me if I choose not to do so, and feel no connection to the idea of parenthood?

In fact, this discussion underlines the doubtfulness of the need for indispensability. This is too lofty an aspiration for most of us. We should reject the claim that elderly individuals need a role relating to their age as such because they need to be indispensable. Nonetheless, I will now set aside such concerns, and consider various possibilities for such roles.

1.3 Unique roles

Callahan suggests several roles as "sources of meaning and significance" for elderly people, but only one is relevant to ageing enhancement. This is the idea elderly people's "primary aspiration" should be serving youth and the future (42-43). As Callahan describes it, service to young people rules out ageing enhancement, since such interventions would use resources that could go to medical care of young people. Although this has obvious links with the Egalitarian Objection, the problem as it stands here is not one of distributive fairness, but of purpose; if elderly people are concerned with extending their own lives, they cannot really be focused on serving the next generation. Instead, they should "step aside in an active way", both refusing additional healthcare and "working until the very end" for the next generation (43). I consider the idea of a complete life, and the broader issue of intergenerational distribution of medical resources, in greater detail in Section 5.2. I will now suggest two worries about the view that elderly people must derive meaning through service.

While elderly people can certainly find meaning in helping others, this is not unique to them as an age group; we can accept that this has a place in a meaningful life without making it their primary focus, just as we do for other age groups. If service grounds meaning for elderly people, the implication is that an elderly person who fails to step aside at the right time will lack a meaningful old age, and thus be doing himself a disservice. But 'serving' elderly people might equally provide meaning for the rest of us. And just as we can aid elderly people while placing limits on our duty of care, they might 'serve' the rest of us (and each other) within limits.

Many elderly people have already given decades of service to society. Lorna Goodison's poem 'Bam Chi Chi La La' (2004: 22) imagines a woman working as a charwoman in London, dreaming "of her retirement mansion in Mandeville". Here we see a person living for a certain kind of old age. Having worked hard with this aim in mind, she may wonder at the claim that she cannot live meaningfully unless she serves the next generation by sacrificing her leisure time. Such a person might wonder why, at this stage, the demand for her service should increase. This is not to advocate "a right to self-absorption" (Callahan, 1995: 49), for a person can acknowledge social obligations without being committed to the extent of service Callahan advocates; the question is rather why one's service should become more demanding once one has reached old age. Such a demand assumes a single shape for life, whose focus is very much on youth; youth is the time for living and pursuit of one's own interests and goals, old age a time for service. This shape will not be attractive to those who sacrifice much in their mature years so that they may enjoy their old age.

1.4 Thin meaning

If meaning requires not just social resources but also internal resources to engage with them, as I have suggested, there is a real possibility that a society that offers only one avenue of meaning for a large section of its population will exclude many people. Callahan notes that, "there would, at minimum, have to be a strong social consensus in...favour" of his view of meaning in order to "override the harsh symbolism...that would be implicit in working through the details of a denial of that medical treatment which saves lives" (200).[10]

The potential for regaining the social consensus Callahan imagines was present in traditional societies is thus crucial for his argument, and indeed seems central to any theory which tries to set a rigid theory of meaning for large numbers of people. Moreover, it seems clear that what is necessary is an 'attitude' consensus, i.e. sincere agreement in settled ways of thinking and emotional reactions. This contrasts with pragmatic compromise, where individuals may reach mutually acceptable positions without altering their attitudes or preferences. Democratic politics often involves pragmatic compromise; politicians attempt to persuade voters and representatives to adopt new attitudes, but bargaining and deal-making are par for the course. This does not mean that democracies cannot reach substantive agreement on policy decisions; various attitudes may recommend the same policy on different grounds, and different parties can agree to mutually acceptable decisions that do not give anybody everything they want (see e.g. Appiah, 2006: 69-86). Yet for people trying to make personal sense of their lives, pragmatic compromise, which alters behaviour rather than attitudes, is insufficient. We cannot make the meaning a person attaches to their life the subject of a pragmatic compromise; it must be something that they accept and internalise, or it is no meaning at all.

[10] One could insist that an old age of service would be objectively meaningful whether its participants realised it or not; but it's not clear why people should care about that sort of meaning at all.

Callahan acknowledges this need for attitude consensus, but offers no substantive advice other than advocating "societal self-reflection", without indication of how this process will operate. He further claims that liberal individualism's "thin theory" of value means that, "there is at present no meaning for the aged unless they can supply it for themselves" (1995: 60). So perhaps his position is that although 'thick' meaning is hard to come by, it is the only kind worth having because it alone can provide the social resources that elderly people currently lack, and so re-establish some sense of meaning in their lives.

Many elderly people do lack an explicit framework or template for making sense of their lives, and so do many of the rest of us. Of course, our values and choices do not emerge from the void; we develop various preferences without choosing them, while the social and natural world constrains our possibilities considerably. But there is no strict template of the kind Callahan offers for anyone. The question is why anyone should necessarily want such a narrow template.

Callahan may think elderly people lack the requisite social resources for meaning, such as a cultural background or options for activities and relationships that can provide meaning. This would be relevant, since personal meaning for most people requires social resources and connections. Certainly, some elderly people feel isolated in contemporary society. Yet this may be for a variety of reasons, such as the professionalization of care and increased geographic mobility that takes some adult children away from their elderly parents. A successfully pluralistic society offers various options for developing individual meaning, and there is no reason that such a society cannot establish institutions, or encourage informal networks, that offer advice and information to those in need of it, without having a single outline of 'the meaningful life'. We should also beware the assumption that today's elderly really are more isolated than their forebears, since the social data does not support this common assumption (see e.g. Thane, 2000: 407-435; 480-481).

A further argument for a thick theory of meaning is that without such a theory the practice of medicine cannot have "a clear direction and purpose", while the welfare of elderly people depends on such a purpose. This hits at the heart of the application of Callahan's discussion to ageing enhancement. Callahan notes the possibility of a person retaining physical health beyond the stage at which his "life seems to possess significance for him", and suggests that this should not be an aim of medicine. He contrasts this with the opposite of "a person's body losing its wholeness and dying well before the person has been able to live out a full life", which is defined *inter alia* as a life the end of which "will not seem to others an offense" (66).

There is a switch, at least terminologically, from a subjective, personal sense of meaning to an objective, social sense. Callahan argues that medicine should not aim to keep people alive past the point where they see no reason to live. Of course, we must be careful in specifying this claim, since people may rediscover purpose after a time. We tend to be much more sceptical, even appalled, when non-elderly people claim to see no reason to live than when elderly people

make such a claim. There is good reason for our caution when younger people are concerned; but since elderly people can also rediscover their sense of purpose, perhaps we should be more cautious in our acceptance of claims by elderly people that their lives no longer seem worth living, rather than falling back on generalisations about age and natural lifespans. Nonetheless, the idea that we should resist forcing or cajoling people to live beyond the point where they cease to see any value in doing so is an attractive model for medicine. And there are plausible criticisms of a medical model that is obsessive about maintaining life at any cost, that medical staff may fail to represent accurately the likely benefits and potential costs of heroic measures to extend life.[11] But it is misleading of Callahan to pair this agreeable thought with the conclusion that medicine should keep people alive only until some *socially agreed* terminus of meaning; the more natural contrast is the view that medicine's aim should be to avoid individuals' bodies losing their 'wholeness' before their lives cease possessing significance *for them*.

Finally, Callahan might think that a thin theory of meaning is not really a theory about meaning at all. The thin theory of meaning is explicit about relying heavily on individuals' subjective evaluations. The idea of discovering the meaning in one's life, on the other hand, at least implies a significant role for something external to the individual agent. The resultant criticism might be that the thin theory of meaning leaves us relying on something that is ultimately arbitrary, when a search for meaning is a search for something more substantive. Callahan also worries that leaving the meaning of an individual's old age as a purely private matter entails "evasion" or "banishment" of the issue (Callahan, 1995: 31), criticising Gruman's account of an individualistic vision of old age, which leaves questions of value endlessly "open for future resolution". Similarly, De Lange (2012: 143) objects to individualistic thinking on the grounds that "individual constructions of meaning are not invented out of the blue, since they are mediated by public discourses" or social understandings.

We might read this complaint in two ways, neither of which is particularly helpful for the thick theorist's argument. On the one hand, the criticism may simply be that meaning requires us to marshal social as well as personal resources. And here there is a cogent criticism of some instances of the thin theory, at least as it may be applied in practice. This is simply that if the thin view insists that all facets of one's life and identity must be equally up for grabs, and that there can be no input from external sources, it may lead us vulnerable to the 'paradox of choice'.[12] People are capable of choosing only from within limited options; we need to begin with some solid grounding on which to make choices. The kind of open-ended reinvention that Gruman suggests will be unappealing or simply unachievable for many people. The thick theorist's worry may be that if liberalism insists that we must make a choice on everything, and hold everything endlessly open to revision, then it leaves us with nothing with which to make

[11] See e.g. Gawande (2014).

[12] e.g. Schwartz and Ward (2004); Vohs et al (2008).

those choices. Able to decide everything, we will be left paralysed. And here, it seems entirely plausible that social roles may be part of the solution. In taking on a social role, an activity becomes more than just another choice I have made. It becomes a part of my life that I cannot regard as easily abandoned; but it can only do so if I do not regard it simply as yet another option I am trying on for size, and could cast off effortlessly. And most social roles seem in part to depend on others' understanding of us; we cannot determine many of our social roles by ourselves, so the romantic liberal vision of the heroic individual shaping her identity entirely on her own terms looks unrealistic.

But the liberal theory of meaning need not maintain that meaning comes entirely from within. The things that we value and see as meaningful are shaped by social influences. The thin theory does claim that the individual is the ultimate arbiter of this question; but the resources they bring to bear on it do not emerge in a vacuum. Even if most people want to 'close the question' of how their lives can be meaningful, providing the social resources for that endeavour need not, and indeed should not, attempt to make one size fit all; in de Lange's terms, even if some public discourse is necessary for individual meaning, no *particular* discourse is, and there is no reason for that discourse to be dictated, rather than enabled, by the state. I agree that we may need to restructure how we engage with elderly people who feel isolated and aimless; but providing a monolithic outline of the meaningful life, rather than trying to socially engage with people as individuals, seems as bad as leaving them entirely to their own devices.

A shift toward thin theories of meaning may well have opened up our choices in ways that can be difficult and frightening, and that may sometimes make us long for a time when things were apparently simpler. The thin theorist insists that the cost is worth it, or at least can be. Perhaps there is something to Callahan's concern: modern liberalism in practice sometimes seems unwilling to even provide suggestions or support for the difficult task of working out who we are and what we value. But a thin theory can walk the line between isolated individuals and rigid social structure, with a view of individuals supporting one another in coming to find their own sense of meaning.

On the other hand, the criticism may be read as rather stronger, claiming that there is an objective truth to what makes life meaningful, constituted by some facts about value that hold entirely independently of how we feel about things. If there is such an objective meaning that applies to everyone, it is clearly a normative fact that fails to engage some people. The thick theorist must then claim that we have good reason to insist upon this objective meaning even for those who do not engage with it subjectively, and who engage with another (presumably illusory) sense of meaning. This would be a claim that it is more important to have a 'meaningful' life in this sense than to feel as though one's life has meaning.

Yet a failure of some to find a certain way of life meaningful should surely undermine an objectivist's claim that it *is* meaningful. On what could one possibly base such a claim other

than evidence that humans in general do find such a life meaningful? And if some individuals simply fail to conform in that regard, our initial reaction ought not to be that *they* have made a mistake, but that it was we who were mistaken in the apparent universality of our claims. On the other hand, Callahan might want to claim that even if some people do not grasp onto his vision of meaning immediately, they will do if it is impressed on them in the right way. But even if this is true – which I doubt – he would also need the further claim that no *other* form is available; for if alternatives are also acceptable, the fact that his vision is one way to find meaning in life gives us no impetus to accept it. Again, the existence of individuals who appear to derive meaning from life despite a lack of 'age-appropriate' roles undermines this claim evidentially.

Although Callahan's vision may appeal to some, there is no reason to think that it is a necessary, or even attractive, outline for all of us. If Callahan's solution is deeply flawed, then his opposition to extending the lives of elderly people on the ground that it gets in the way of that solution is flawed as well. Elderly people need not conceive of themselves as primarily existing to 'serve' younger generations by getting out of their way in competition for social resources. Although there may be necessary social components to a meaningful life, an insistence that life-extending healthcare necessarily gets in the way of those components seems groundless.

1.5 Preparing for death

One of Callahan's central concerns is our attitude to mortality. Part of the motivation behind his discussion involves a repurposing of death; rather than being negative, death is a necessary part of the meaningful life, since it is the ultimate way to make room for the next generation. But although he opposes life extension beyond a certain point, Callahan (80) supports interventions that compress senescence without stretching out our lives, reducing the effects of old age to a shorter period at the end of life. Kass (2001) disagrees; death without senescence would "become even more of an affront"; our current trajectory of physical ageing is necessary for a meaningful death, and hence a meaningful life. This section outlines Kass's argument, and some problems with it, before addressing the more general thought about having the right kind of attitude to death and mortality.

There are two strands of argument at work in Kass's discussion. The first suggests that death is made (more) agreeable if it ends a period of suffering rather than a period of enjoyable life. Since death is only good in comparison to the period from which it relieves us, according Kass, we should not try to improve the final stages of life. Presumably, the worse off one is in the time before one's death, the better, since death is then a greater release. But this argument seems to be a non-starter; the relative disvalue of dying when one's life is going well could easily be outweighed by the additional value that comes from restricting senescence.

Senescence may also alleviate the suffering of mourners. Kass offers the example of a widow whose sorrow is mitigated by the relief of her spouse's pain; although she mourns his demise,

she is also glad of it. Yet while we benefit from the knowledge that loved ones no longer suffer, we suffer more before their deaths than we would if their suffering were reduced while alive. The reason we are relieved when death ends a loved one's suffering is because we do not want them to suffer in the first place. Moreover, if senescence is great enough, we may suffer the financial, physical and emotional burdens of care. I also doubt very much that many people could really want one of their loved ones to suffer to make their death somewhat less painful in retrospect. Someone who chose to suffer senescence for this reason would be bestowing a misguided 'gift' on their family and friends.

The second strand of Kass's argument is that senescence prepares us for death by making us less attached to life. Since death is inevitable for all and troubling for many of us, it would be a mistake to avoid senescence. Kass highlights this proposal with Montaigne's claim that, "in proportion as I sink into sickness...I no longer cling so hard to the good things of life when I begin to lose the use and pleasure of them, I come to view death with much less frightened eyes". This idea seems most applicable to the kinds of appetitive decline that many people experience in old age. It is more complex to apply to other senescent ailments that do not directly involve appetitive loss or mental withdrawal, such as the pain of arthritis, or the embarrassment and frustration of incontinence. Still, Kass might point to the fact that individuals who undergo these problems sometimes come to see life overall as less desirable, and hence death as less fearful.

Again, one might question whether the benefit of a reduced fear of death will necessarily outweigh the various harms of senescence. And although Kass assumes the only way to come to accept one's death is via painful experiences in life, as I note in Chapter 5 some people become less fearful of death because they are satisfied by positive experiences in their lives. So Kass's route is not the only one available to accepting death.

However, I want to focus on the more fundamental axiological assumption, present in both Kass's and Callahan's discussions, that there is a uniquely desirable attitude towards death, which is that of calm acceptance. Section 1.5.1 considers a related discussion by Kagan, who claims that two typical negative attitudes towards death are misplaced. Section 1.5.2 then considers the idea, discernible in both Callahan and Kass, that the only way to make sense of death is to embrace it in some way, and suggests an alternative way of relating to our mortality that does not collapse into denial.

1.5.1 Attitudes to mortality

Kagan argues that neither fear nor anger is an "appropriate" attitude to death; he claims fear is only appropriate when, *inter alia*, there is "some uncertainty about whether the bad thing will actually happen" (2012: 292), while anger is only appropriate both when directed at a person, and when one has been wronged (299-300). Death, says Kagan, fails all these conditions. While

this does not entail the conclusion that calm acceptance is the only appropriate attitude, rejecting two common negative attitudes to death may support Kass and Callahan's assumption.

Kagan appeals to our intuitive sense of propriety in various cases, but offers no general criteria for emotional appropriateness. One might think it sufficient to establish that an emotional reaction is inappropriate if it neither serves a further purpose, nor is good in itself. Perhaps Kass has something like this in mind; an attitude of calm acceptance is a good in itself, whereas 'negative' emotions are only appropriate if they serve some further function (e.g. anger might motivate us to action). However, I think Kass has something slightly different in mind, which is that acceptance of death is the only way to make sense of our mortality, which is a necessary component in a meaningful life for self-reflective creatures like us.

Kagan, on the other hand, seems to have something more like D'Arms and Jacobson's evaluative account (e.g. 2000) in mind. They suggest that in many cases emotions contain evaluative attitudes and that these can be the objects of 'fittingness' evaluations. For instance, to be envious is to represent the object of one's envy as having something that one lacks, and to further represent that fact as bad. When we assess whether something is worthy of envy, then, we are factually assessing whether the envied person fulfils these criteria. If this is right, then to make the argument that certain emotions are inappropriate with regard to some object of evaluation, we need to identify necessary components of those emotions that are lacking in the object. Although he is not explicit, this seems to be Kagan's strategy, since he appeals to certain features that an object of evaluation should possess to make emotions appropriate, rather than the functional role of the emotion. I will now argue that he does not succeed.

Kagan offers several examples where fear seems inappropriate due to the certainty of an outcome. For instance, he imagines a teenager whose mother has said she will collect him from a party between 11pm and 1am. In this case, says Kagan, the teen might reasonably fear an early pickup, since he wants to stay at the party. But if he knows that his mother will arrive at midnight exactly, fear would be unreasonable (297-298). Even if we agree with Kagan regarding this example, another may make our intuitions less clear. S has been kidnapped by a regime that has tortured its victims in the past. His jailer tells S he will torture him in exactly one hour, outlining the unpleasant process in gruesome detail. His painful torture is near-certain – certainly more so than the midnight collection in Kagan's case. Any account of fear that renders it an inappropriate response in this situation must be rejected. S should be very afraid (at least, fear would not be inappropriate).[13]

In fact, Kagan's example is also problematic, not because the adolescent should fear being collected at exactly midnight, but because he should not fear being picked up at all. Being

[13] Kagan might say that although S's torture is certain, there is some doubt *what it will be like*. But we can change the example so that S is tortured twice; why should he be any less frightened the second time around?

collected at 11pm rather than 1am is not worthy of fear. Rather, he should hope that the pickup time is later. It is certainly only appropriate to hope under uncertainty. This better fits Kagan's uncertainty principle; hope is clearly irrational in the case when the teen's mother has specified an exact time, assuming she is punctual. Similarly, hope would be (epistemically, even if not practically) irrational in the kidnapping case; S's torture is all but guaranteed. So while we might argue that we should not hope to avoid death, this says nothing about fear.

Kagan also claims (299-302) that we can only reasonably become angry in situations caused by other people. Death, of course, does not always involve another person. Fessler (2010) argues that the evolutionary function of directed anger (which, we may think, should inform our view about what the emotion is likely representing) is that another has transgressed. Anger directed at another individual specifically seeks to blame, so it is inappropriate to get angry at anything not capable of intentional action, since that is a requirement for culpability. Yet even if we can only reasonably *direct* anger at persons – so that it is irrational to shout at my computer when it deletes an important document, for instance – anger need not be directed. I can be angry about something without being angry at anyone. One may be angry about impending death without thinking that somebody is to blame for it, and so without needing to be angry at anyone. I can be appropriately angry about something that is nobody's fault, such as the flood that has delayed my train to an important meeting. My anger signals a belief that something important has gone wrong; if I blame myself or another for that, then I will be angry at them or at myself. But if I do not blame anyone, there is no reason why I cannot be angry that things have gone awry.

Kagan also claims that anger is only appropriate if you are wronged. This claim seems unsupported; it is appropriate to be angry at oneself for making a stupid but crucial mistake, but in such an instance you have not wronged yourself. Similarly, one might be angry not because one has been wronged intentionally but because a significant harm is undeserved. So there is no good representational argument for thinking that acceptance is the only appropriate attitude to death.

However, as I suggested, there may be an alternative theory behind the idea that only acceptance is an appropriate reaction to death, which is that this is the only way that we can incorporate our knowledge of mortality into the task of making sense of our lives, i.e. living meaningfully. If we cannot live meaningfully unless we accept death, and Kass is right that restricting senescence will scupper our chances of accepting death, we should not even restrict senescence. In the next section, I suggest that this alternative argument also fails.

1.5.2 Making sense of death

Death presents a challenge to any secular theory of meaning. Since it is foreseeable but ultimately unavoidable, one response is to accommodate death in our sense of meaning, recasting it as friend rather than foe. Kass and Callahan effectively offer different versions of this choice. Callahan incorporates mortality into meaningful life through a change in attitude,

making it a necessary element of serving young people, and thus of his account of a meaningful life. Since death is necessary for life's meaning, it cannot be an affront to meaning. Kass's view holds that so long as we focus on the withering of our bodies, death appears as a release rather than a deprivation. These are therapeutic acceptances; we defang death by having it serve our interests, thereby rendering it an ally.

Yet death in such cases only 'serves' our interests in the sense that it aligns with them, and the accommodation comes not from death but from us. If I change my preferences so that they are met by what you were going to do anyway, and then claim that you are acting 'in my interests', I get matters significantly wrong, for my subjective interests track your actions, not vice versa. Both Callahan and Kass engage in a similar gerrymandering so that death can be categorised as beneficial. The dissonance is starker for Kass, whose account makes death worse when we continue to live in the way that has afforded our lives meaning until old age. We achieve a good death by having it serve our interest in ending the suffering caused by senescence; yet since that interest could have been served by the very measure Kass rejects – ageing enhancement – there is something odd in his claim for the value of death.

However, the problem is also present in Callahan, albeit more complexly. He advocates a change of attitude, embracing as positive an element of existence that many see as negative; in his words, service to young people includes acting as a role model by ageing "with grace...accept[ing] decline and loss" (1995: 49). Consider what Callahan might say to someone who sees death as a threat to meaning in her life. He would presumably insist that her life cannot have full meaning unless she finds a place in it for death. He would then point to his own account as providing a positive role for death, as the mechanism by which older generations most fully step aside. He would conclude that we should change our attitude about death in order to give it a positive role in our lives.

But for those of us who do see death as something to regret or even fear, this advice gets things in the wrong order. It seems rather like intentionally deciding to fall in love in order to avoid feeling lonely; while it is true that that a successful acquisition of such an attitude would 'solve' the problem, it is hard to see how one could sincerely set about acquiring such an attitude. That is not to say that either Kass or Callahan are being insincere; they may genuinely see death in the way that they describe. The point is that it is too simplistic to say that because thinking about death in a certain way will allow some people to make sense of it, everyone should think that way. Those who do fear death cannot be given *pragmatic* reasons to stop fearing it; we want an account of death that remains true to our perception of it, or convinces us sincerely to change our attitude; an account that recommends changing our view of death *in order* to make it meaningful seems to answer the question 'What can I make of this?' with 'Nothing. Let's call it something else.'

There is a connection here with Nietzsche's claim that the problem with suffering "is not suffering itself, but the meaninglessness of suffering" (1998: 49). If we can identify a cause that death serves, it is no longer unbearable because it is no longer meaningless. This thought saturates the arguments discussed above; identify a purpose for death, and it will be meaningful. Without a positive purpose, it cannot make sense. As muddled as it seems, this claim might come through if there were no other way of making sense of death, if the only other option were to have it as a terrifying spectre that we ignore until forced to confront it. Such an attitude at least has considerable pragmatic downsides, since a failure to confront mortality as a reality will reduce our ability to plan for it. And if our fear sits in the back of our minds, repressed but not entirely forgotten, it may also be psychologically damaging. So I agree to an extent with Kass and Callahan that a culture of outright denial is unlikely to be beneficial.

Yet as Momeyer (1988: 11) notes, there is a further option between denying the inevitable and embracing it, which he calls "resistance". The lesson of resistance is that making sense of something need not involve imagining it as a benefaction. I do not evade or deny my mortality when I think that I do not want to die, when I feel my own mortality as an awful limit on life, or when I welcome effective measures to extend my life. Resistance involves confronting the challenge death poses. The response it gives might be ineloquent: 'Damn'. But it is a reply, and it does give death a place in my life, as a barrier, a limitation that I refuse to validate. We can find meaning, *inter alia*, in our opposition to death.

Camus advocates a similar attitude of revolt against what he perceives as the inevitable absurdity in life (1975: 53), which Nagel (1979: 22) chastises as "romantic and slightly self-pitying". Might something similar be true of resisting death? I think not. Resistance is not a denial that death is inevitable, and so is not 'romantic' in the sense of being delusional. As for self-pity, there is no reason that an attitude of resistance needs to involve "shaking a fist at the world" (Nagel, ibid) or conceiving of one's death as a grand tragedy. Resistance to death is an attitude that confronts death, and one's negative emotions about death, honestly and without feeling as though one has failed through such an attitude; since one could express similar feelings about the death of others, there is certainly no need to be self-absorbed in a solipsistic sense.

There are perhaps two concerns about such a response. I have suggested that it would be insincere for at least some people to recast death as an ally simply in order to avoid it threatening our ability to live meaningfully. An appropriate way to respond to death should sincerely reflect our fundamental evaluative take on it; gerrymandering death as an ally fails to do this. But there is another, instrumental, take on this idea. Even if there is significant value in my notion of having a sincere take on the world, this is not the only source of value in our lives; our happiness and our peace of mind are also central. This response is important, as it suggests limits on the value of sincerity. If our sincere take on our mortality threatens to ruin our ability to cope with life at all, I agree that we may have reason for self-deception; while happiness is

not the only value, nor is sincerity. But this seems to me unlikely, and unsupported by evidence. Moreover, if there are attitudes to death that we might take that do not involve embracing it, then we should also note that the accepting attitude looks like it may be costly in other ways, detailed in my criticisms of Callahan and Kass.

The second worry is that since our decision over whether the state should pursue ageing enhancement must be taken at least at the societal level, it may not be sufficient that *some* other attitude is possible. If only a few people can take on such an outlook, or if most people are in fact like Kass and Callahan in their outlook on life, perhaps ageing enhancement would rob more people of meaning than not. But this argument does not work; for we would need to show not just that most people can only make sense of death by accepting it, but that the only way for them to accept it is to block ageing enhancement. In fact, the availability of ageing enhancement provides a distinct *opportunity* for people to embrace death; by refusing ageing enhancement, people could make a choice to embrace death at a particular age, rather than having it forced upon them. Moreover, in the absence of evidence that most people are unable to make sense of death without embracing it, it is not clear why we should allow such an assumption to dictate our policy decisions. There may be challenges in the attitude of resistance in ensuring that people do not slip into denial, and that the casting of death as a foe does not cloud our judgement in making decisions about the ends of our lives. But these challenges do not seem to me insurmountable.

Finally, even if we accept that most people would be best off accepting death, it is not clear that ageing enhancement or its pursuit must undermine that possibility. Perhaps Kass's argument should give us pause for thought about how we represent the prospects of technologies that are not yet reality; talking publicly about the 'end of ageing' or 'conquering death' may be unhelpful in fostering denial rather than resistance, even if we do think that those goals are in principle realisable. But it is also clear that many people are fairly sanguine about death both long before they slip into senescence, and while still embracing life-extending technologies. One can surely think that death would not be so bad, while still preferring more life – of a certain quality – if that is available. It is one thing to accept that there are limits – that we will never *eliminate* death, or disease, or other ills – but it is quite another to refuse to engage with attempts to push those limits. Insofar as the Meaning Objection rests on the assumptions that ageing enhancement will undermine our ability to emotionally embrace mortality, and that this is a necessary part of a meaningful life, I reject it on both counts.

1.6 Summary

The arguments considered in this chapter suggest that ageing enhancement will undermine our abilities to make sense of our lives, and to live meaningfully. Callahan worries that elderly people lack a distinctive social role that can give meaning to their old age, and that the relentless chasing after youth represented by modern medicine contributes to that. But although the thin

view of meaning is by no means easy to pursue, Callahan's view is overly restrictive, relying on an overly narrow view of old age that cannot play the role he supposes, and places unwarranted burdens on elderly people.

Kass' concern is that attempts to eliminate ageing ignore the role that ageing plays in helping us to accept our mortality. I argued both that this claim is untrue, and that the costs of Kass' position anyway seem to outweigh the benefits. I then went on to argue that Kass' view implicitly suggests that the only way to make sense of mortality is to accept it, arguing that this commits a similar mistake to Callahan's view of being overly narrow. Both Callahan and Kass take an aspect of human life that many of us find troubling, and try to make it less troubling by giving it a role. But I have suggested that this tactic could only be taken up by many people in an insincere way, even if it is not intended that way; those of us who find physical ageing and death genuinely troubling cannot simply render them less troubling by thinking of them as allies. These worries are based on an overly narrow view of how to make sense of life, and so cannot form a plausible objection to ageing enhancement. In the next chapter, I consider a related worry based on the claim that ageing enhancement will undermine our relationship with particular sources of value.

Chapter 2: The Meaning Objection – Radical enhancement and value

I have considered two arguments that suggest ageing enhancement would rob us of meaningful life. This chapter considers a third worry in this vein, inspired by Agar (2010), that 'radical' ageing enhancement would divorce us from current sources of value. Section 2.1 outlines Agar's view that we ought to adopt a kind of conservatism towards sources of value, and discusses its application to both radical ageing enhancement and, briefly, radical cognitive enhancement. Radical enhancement will significantly change our attitudes towards current sources of value; value conservatism says that even if post-enhancement life would be good, relative to our new values, we should have a bias towards existing sources of value. This section concludes that although problematic, there is some plausibility to this worry with regard to cognitive enhancement. Section 2.2 explains that the changes Agar thinks we will undergo following radical enhancement differ greatly between ageing and cognitive enhancement, and considers some initial empirical concerns with Agar's predictions about ageing enhancement. Section 2.3 explains how the difference outlined in Section 2.2 undermines the criticism as applied to radical ageing enhancement, even if we grant it to some degree with regard to radical cognitive enhancement.

2.1 The value criticism

While Callahan is concerned with the effect on our ability to find meaning in our lives, and both he and Kass are worried about our ability to cope with death, Agar's concern focuses on our relationships with particular sources of value. Again, I will not address every detail of Agar's view, but instead consider the strongest version of his criticisms, which deviates somewhat from the official version.[14]

One way to approach Agar's account, and to see both what is plausible in and problematic about it, is in relation to Cohen's (2011; 2012) discussion of value conservatism. Cohen's central claim is that we should have a "conservative bias" to particular sources of value; as I will suggest, a very similar idea informs Agar's concern. This bias involves preferring existing sources of value over novel sources when the two come into conflict, even if the latter would deliver greater overall value considered objectively. One of Cohen's examples is All Souls College, Oxford. He suggests (2012: 146-148) that the College's members have reason not just to preserve it, but to preserve it largely as it is, even if some changes (such as moving from being entirely self-funded to seeking external funding) would enhance the very values that the

[14] A significant deviation is that I pay no attention to what Agar calls 'species-relativism' about value, which says that radical enhancement would make us no longer able to appreciate distinctly human sources of value.

College seeks to promote, such as the ability to educate students. This is because there is additional value to doing things the way that they always been done, and to respecting the historical trajectories of how sources of value came to be valuable. All Souls College has a certain character, and the preservation of that character is worth something. We should also respect sources of value not just for their history, but for their particularity; Cohen also insists that we should not melt down a beautiful statue, even if our intent is to create an object with greater aesthetic value.

Although both Cohen and Agar discuss various sources of value, I will focus on personal relationships, because they relate quite obviously to ageing enhancement, and because they are a case in which I think most people hold some degree of conservative bias. As Cohen acknowledges, some of the examples he uses will simply not convince some people. For instance, in his discussion of All Souls, the conservative position is countered by a modernising position, which sees no distinct value in leaving things the way they are. Cohen thinks that almost everyone will accept a degree of conservative bias with regard to some sources of value. Close relationships are generally such that the individual matters because of particular ways that they are, and the relationship is valued for its distinctive history (see, e.g. Kolodny, 2003). We would not abandon a friendship simply for the promise of a new friend, for instance, even if the latter person promised greater quantities of what we love in current friends, because we both share a history with our current friends, and because we value them as individuals. So we have some reason to avoid changes that would undermine our current relationships, even at the promise of novel relationships that promised more of what we value currently.

This does not mean we cannot be content for our relationships to evolve over time, with their particular nature sometimes changing quite radically; if two childhood friends keep in touch throughout their lives, it would be decidedly odd if the character of their friendship was unchanged, or if they tried to keep it as such. But there may be some parameters on acceptable changes. For one thing, the same degree of change that we might see across a lifetime of friendship happening quite suddenly might threaten the relationship in a way that more gradual change does not. There are also changes that would alter the character of a relationship in such a way that we would want to resist such a change now, even if we would not regret it once it had happened. Such changes will also involve considerable change in the particular values and personalities of the individuals concerned. For instance, imagine a couple with political careers who, while they genuinely care for one another, maintain their relationship largely because it is politically useful. This relationship might suit their needs very well, and thus make them happy; but if they could foresee this change when they are young and more deeply in love, they would (and perhaps should) resist such a change, both in themselves and their relationship. So while there is plenty of scope for flexibility even in relationships, there do seem to be certain parameters within which the nature of particular relationships is valuable in a way that makes a conservative bias plausible.

Agar claims that both radical cognitive enhancement (RCE) and radical ageing enhancement (RAE) would fundamentally change our interests and values. This will, he claims, impact our relationships in various ways. If I undergo RCE, my interests and tastes will change radically as well, in ways that make it unlikely that I will retain much in common with those with whom I currently have important relationships. Following RAE, says Agar, I will want to avoid many of the activities that maintain my relationships, since I will become significantly more risk-averse. In both situations, Agar predicts that I will change my attitudes in ways that would fundamentally warp how I relate to my loved ones. Even if my enhanced life would contain more overall value relative to the new interests and concerns I would have post-enhancement, Agar claims we have reason to hold onto what we currently value. This is a sentiment that Cohen would endorse; the picture Agar paints is of my attitudes changing such that I no longer relate to my partner in the ways that are constitutive of the particular character of our relationship, and which fail to respect our history together.

Although it takes us away from ageing enhancement, it is worth briefly discussing Agar's worry about RCE, as it will help to highlight the problems with his RAE argument. Although I will not endorse Agar's criticism of RCE in anything like its full strength, I will suggest that the concerns he raises point to an additional risk to RCE, which potential enhancees should take into account, but that even this weaker position does not apply to RAE. Agar suggests that RCE will reduce my toleration for some activities I currently enjoy; just as we grow out of the activities we enjoy as children as we learn to appreciate more complex pastimes, RCE may increase our cognitive abilities at the cost of finding current pastimes dull.

Agar outlines two worrying post-RCE scenarios with respect to my relationships (taking a romantic relationship as a central case). The first is that I undergo enhancement and my partner does not. I would lose enthusiasm for many of the common interests we share, and which maintain our relationship, because they would be too simplistic for me to enjoy. Perhaps the relationship between the cognitively enhanced and unenhanced would be akin to that between adults and children. We can relate to children on many levels; but those relationships are quite different from romantic relationships. Undergoing RCE when your partner does not, then, will irreparably alter the character of your relationship.

The second scenario is that we both undergo RCE. Although we would both be capable of enjoying the same activities (because our cognitive capacities would still be roughly on a par), Agar thinks it likely that our respective enhancements would take our interests in very different directions, again undermining the common ground that cements our relationships. In both cases, I have strong reason to resist such changes, even if I were confident that I could find a new relationship with someone who was more in tune with my new interests, and even if that new relationship would be overall better for my enhanced self than my current relationship is for me now.

Agar's concerns regarding RCE are exaggerated. Cognitive capacity is not the only source of shared interests. Highly intelligent people can enjoy quite simple activities; even if poetry is superior to push-pin that does not mean that poetry aficionados cannot take pleasure in the occasional trite game. It is certainly true that as our cognitive capacities develop, we are no longer satisfied with a steady diet of the same activities that kept us entertained when we were younger, and it may be that this trend would continue with radical enhancement. So an unenhanced person who insisted on her enhanced partner only doing things that she would also enjoy would create problems in a relationship. But if the enhanced partner had space to exercise her newfound intelligence, there is no reason why the relationship could not survive unequal enhancement if the couple also shared other interests; there are plenty of activities that can be enjoyed by enhanced and unenhanced alike. Moreover, it is not at all clear that we should be as pessimistic about the prospect of two enhanced individuals ending up with similar interests, particularly if they shared strong interests to begin with; although our passions and preferences are partly shaped by our cognitive capacities, plenty of other factors play a role.

Still, it seems as though the character of one's relationship could be radically altered by RCE, and that this has a very different significance than the kinds of gradual changes that occur in relationships currently; even if a couple who have been together many years are both very different people than they were when they met, those changes have been partly structured by and reflective of changes in the other. At the least, then, Agar's argument suggests RCE is a greater risk than acknowledged for those of us who have some level of conservative bias towards our relationships. But I will now suggest that even if we are permissive about Agar's criticism of RCE, the same concerns cannot plausibly extend to RAE.

Although his predictions about the effects of RAE on enhancees are very different from the effects of RCE, when it comes to personal relationships it seems as though the same worries are present. However, I will suggest that the argument has far less force when it comes to RAE because the nature of its effect, even if we accept Agar's predictions, is importantly different in a way that Cohen's discussion highlights. I will also suggest that his empirical predictions are rather less plausible for RAE.

While Agar's vision of RCE involves a significant change in one's attitudes to others – one comes to see them as trite and not worth spending time with – the picture he paints of RAE has different implications altogether. Even on Agar's pessimistic picture, RAE will not make me see my partner *herself* as any less a source of value. Rather, I will be less willing to interact with her because of circumstantial pressures. Agar makes a variety of predictions about the attitudes of those with extended lifespans, but I will focus on just one, central criticism: the claim that those with significantly greater life expectancies will become very risk-averse due to the much greater loss involved in their death. As with my discussion of RCE, I will focus on the supposed impact on personal relationships, although Agar intends it to apply much more widely.

Agar suggests that death would be much worse for those who had undergone RAE, because they would have far more to lose (116-117). He proposes that an individual's death is bad in proportion to the good life of which it deprives them.[15] The negligibly senescent will lose a great deal more when they die at any particular age than an unenhanced person at the same age. This greater cost will impact our everyday life. Many things we do now carry a slight risk of death. When I go to the cinema there is some small risk that I will be run over as I cross the road, or that the building's roof will collapse on me. The expected benefit (the benefit of the outing going well multiplied by the probability of that occurring) of my cinema trip following RAE stays the same, but the expected cost rises steeply because although the roof collapsing on me is no more likely, it is much worse if it kills me. If my life is sufficiently extended, the expected cost of the trip will outweigh the expected benefit. This applies to a host of ordinary pastimes. Agar thus suggests that the negligibly senescent would become cautious shut-ins, avoiding the risks of interacting with others or engaging in common activities.

Although he does not make the connection explicitly, it is clear that this would have a significant effect on a relationship. According to Agar's predictions, the long-lived would avoid many of the ordinary activities that, while mundane, maintain personal relationships. As such, even if the long-lived did not come to see their loved ones differently, as in the case of RCE, their relationships would be unsustainable.

2.2 Empirical worries

It seems unlikely that people would make the judgements Agar supposes following RAE. I have no idea what level of risk I took last time I went to the cinema. I certainly do not know what the risk was in the detail required to have made a rational calculation incorporating my expected remaining lifespan and the value of the trip. I think this is true of almost everyone. Why should the enhanced do what hardly any of us do now, and take the time to assess risk in an accurate enough way to rationally calculate whether individual activities are worth it? Remember that RAE, unlike RCE, has no effect on cognitive abilities or tendencies. So the negligibly senescent will be susceptible to the same risk-denying psychological biases as the rest of us, such as robust over-optimism about personal chances of injury and accident (e.g. Weinstein: 1987), and just as incapable of making such calculations as we are.

Perhaps Agar thinks all we have to do is track risk in a rough and ready way, i.e. simply become aware that death would be much worse for us following RAE, without an exact comparison. But we do not always think about risk in the sense required. Changes in risk typically need to impinge on our experience if they are to prompt changes in our behaviour. For instance, Tversky and Kahneman discuss what they call the availability heuristic, whereby we call to mind

[15] I think there are reasons to doubt whether this is the correct account of death's badness; but all Agar actually requires is that this is how people will think of the badness of death, which seems more plausible.

similar events to estimate likelihood. One example is a tendency to attribute greater likelihoods to events when similar occurrences are salient. This tendency is fairly elastic; for instance "the subjective probability of traffic accidents rises temporarily when one sees a car overturned by the side of the road" (1974: 1127).

It's not just that we downplay certain risks that do not impinge on their experience. We may not consider *at all* risks that we cannot easily represent to ourselves, even if we know about them. As Ropeik puts it, "our responses to risks are not simply internal 'rational' risk analyses, but also intuitive 'affective' responses that apply our emotions, values and instincts as we try to judge danger" (2004: S57); they also determine whether we even *try* to judge danger. Most people just do not associate a trip to the cinema with death. So it's not clear that such an eventuality would be salient in the sense necessary to prompt risk-assessment. We are also more likely to fear risks over which we feel a lack of control, or which are unfamiliar (Slovic, 1987: 283), neither of which apply to our everyday activities.

Agar insists that past increases in life expectancy have led us to "become less tolerant to threats" to our lives, noting that "it's difficult to think of activities routinely practiced by citizens of the modern rich world with levels of danger equivalent to joining a medieval duke's army or giving birth in the 1300s." He claims that while the increase in life expectancy we have seen since the fourteenth century has totalled about fifty years, negligible senescence promises "a twenty-year period in which life expectancies may improve by eight hundred and fifty years". This means that "there will be abrupt and dramatic increases in our perception of the danger associated with many everyday activities" (119). Presumably, then, the level of risk averseness among negligibly senescent people will increase in a similarly abrupt way. But this supposed correlation is problematic for a number of reasons.

For one thing, Agar's numerical prediction is incorrect even based on de Grey's optimistic projections about what can be achieved in terms of ageing enhancement. Agar infers his claim that we will see an 850 year increase in just twenty years from de Grey's suggestion that "the first 1,000-year old is probably less than twenty years younger than the first 150-year old" (2004c). De Grey's predicted longevity 'escape velocity' says that there will come a point when each gain in ageing enhancement buys us time to make it to the next. So the quoted claim is making no such prediction. Rather, the thought is that the first person to make it to 150 due to advances in ageing enhancement will not hit escape velocity. He will die at 150. However, someone twenty years younger will also benefit from whatever development enabled the 150 milestone. Crucially, because this person hits 150 twenty years later, she will *also* benefit from further work, and will not die at 150. But the next milestone need not be 1,000. All that is needed to make de Grey's claim true is that by the time she reaches, say, 180 another milestone has been reached, maybe 210, and that this keeps happening until we hit 1,000. But then in twenty years' time our life expectancy increases by thirty years, not 850.

This is still quicker than any gains we have seen before. But Agar also provides no evidence for the association of increased lifespans with increased risk-aversion other than a correlation. But while it is true that we take fewer risks in the developed world than would have been conceivable in the 1300s, there are multiple other differences between the 14th and 21st centuries. People did not have a great deal of choice in 1300 about whether to fight in a noble's army. Women certainly did not have much choice about how and whether to give birth. Even Agar's more recent example, of the comparative death tolls in the First World War and recent Iraq war, is not compelling, precisely because many soldiers in the former did not have a choice about the conditions under which they fought or, after 1916, whether to fight at all. The introduction of a professional standing army, for reasons entirely unrelated to increased lifespans, is surely the important factor here. Claiming that their decision was influenced by their life expectancy ignores the more fundamental difference: having the opportunity to decide.

So, there is no reason to think that a desire for ageing enhancement is caused by a higher than average concern with death. There is also no reason to suppose that those with a higher than average concern with death will deteriorate into a scenario where "the fear of death...completely dominate[s] the lives of negligibly senescent people" (114).

2.3 Motivation and attitude changes

Agar's predictions about the psychological changes involved in RAE are thus doubtful. However, a more fundamental issue emerges from his suggestions, even if his empirical predictions are on target. I will suggest that Cohen's discussion of value conservatism can help us see the relevance of a difference between the case of RAE, even under Agar's most pessimistic predictions, and the concerns raised in the context of RCE. With regard to RCE, Agar imagines the enhanced person coming to see their partner and relationship in a very different way, i.e. as trite and unfulfilling. With RAE, this does not happen, even if Agar is right. Instead of coming to see my partner or our relationship differently, RAE causes me to view the circumstances in which I engage with her differently.

In his description of RCE, Agar's imagined agent undergoes direct changes in her preferences and attitudes with regard to their relationship. Following RCE, I no longer see my partner as valuable (at least *qua* romantic partner). Since these attitudes are central to the constitution of a relationship, we may say that this change is destructive of my relationship itself, or at least of the particular character that makes it currently valuable to me. The particular relationship is a source of value; so according to the value-conservative, knowingly undergoing a change that will be destructive of it is to ignore the importance of preserving rather than replacing sources of value.

RAE does not involve such a change. If Agar is correct, the long-lived may be more reluctant, even fearful, about participating in the everyday activities that, however mundane, define their relationship. But this does not as such change how they feel about the other person. Rather than a direct change, what we see in this case is an indirect change in attitude. Following RAE, I

retain the same feelings about my partner; my reluctance about the relationship involves external or circumstantial costs.

A simpler case may clarify this distinction. S thinks that she would like to hunt white rhino. There are two ways we might dissuade her. We could point out that hunting white rhino is illegal. If this persuades her not to hunt, she might say, 'I wish I could hunt white rhino, if only it wasn't illegal'. There is a sense in which she no longer wants to hunt; we have persuaded her that the risk just is not worth it. But there is also a clear sense in which she still does want to hunt. There is nothing about hunting itself that puts her off; it is only that hunting under these circumstances is unattractive. If she could hunt without the risk of jail, she would. This is an indirect change in her attitude to hunting. On the other hand, we might convince her that needlessly slaughtering animals is immoral. But then she cannot give a reply analogous to that given in the previous case. It makes no sense for her to say 'I wish I could go hunting, if only it didn't involve the slaughter of animals'. That just is the practice of hunting. Now she has undergone a direct or constitutive change in her attitude towards hunting.

This distinction highlights that Agar's argument glosses over an important consideration about motivation. We can see this by considering again Cohen's own value conservatism. Cohen's position is not only a claim about what we ought to do, but is also supposed to serve a descriptive role; he says that "everyone who is sane has something of this [conservative] disposition" (2011: 204). As I have suggested, I think it is true that, at least when it comes to valued personal relationships, most people do hold a degree of value conservatism. Since indirect attitude changes mean that I retain my fundamental attitudes towards the object of value (that is, my partner and our relationship), I will also retain the relevant motivations to engage with her, precisely because I not only value her, but I value valuing her i.e. I care about maintaining my attitudes towards her. So even if I do become more cautious as a result of RAE, I will maintain strong motivations to engage in the activities that supports our relationship.

Agar's claim is that I will be unwilling to engage in everyday activities following RAE because I will run something like a cost-benefit analysis, and find those activities wanting; when the expected loss from my possible death during a cinema trip goes up, I will judge that the enjoyment I get from a film is not worth it. But this misses two points about that trip to the cinema. First, when it is viewed as an activity that maintains a relationship that I still value deeply, it is no mere trip to the cinema; its value must include the relationship that it sustains. So even if the expected costs outweigh the expected benefits *from the film*, they are far less likely to outweigh the overall benefit of the trip, and of in general maintaining an attitude of willingness to participate in such relationship-sustaining activities.

Second, even if RAE does make us very cautious, it will not change our psychological needs, which for most of us include contact with others. Agar's mistake is in assuming that each trip to the cinema offers roughly the same benefit. Even if we would avoid the first few trips because

of the psychological mechanisms Agar suggests, later trips will take on a greater importance. I refuse opportunities for social contact all the time, because I assume that more will come along later. But if I go for some time without much social contact, almost *any* opportunity begins to look attractive. Each trip will not be framed in the same way; the longer I go without social contact, the greater the perceived benefit. Moreover, we do not just have a need for any social contact but for contact with specific people who have special significance for us. As we turn down trips, the cost of doing so increases with the weakening of our interpersonal ties.

Since RAE does not directly change our attitudes towards others, our psychological tendencies, or our basic needs, Cohen's observation suggests that *even if* we become more cautious in the way Agar predicts, it is unlikely to make us abandon our relationships as special sources of value because we will retain the strong motivation to interact with specific sources of value. The conservative worry, in this case, provides its own solution. Not so with RCE, since that causes direct changes in our attitudes (at least if Agar is to be believed). After RCE, I come to see my partner as not worth bothering with, and so come to see our relationship as no longer worthwhile. This means not only that I no longer value her in the same way, but also that I *lack the motivation* to overcome this obstacle. RAE does not face this concern, and so lacks even the minimal plausibility that I have suggested Agar's argument against RCE possesses.

2.4 Summary

Even if we grant some degree of plausibility to Agar's criticisms of radical cognitive enhancement, this does not carry over to similar worries about radical ageing enhancement. The changes Agar predicts about how we will come to relate to current sources of value look empirically doubtful, and anyway do not constitute a plausible objection to ageing enhancement.

This chapter concludes the discussion of the Meaning Objection. I have considered three concerns which worry broadly that undergoing ageing enhancement will change our attitudes – towards ageing, death or sources of value – in ways that will undermine our ability to live meaningfully. Having rejected the Meaning Objection, the next four chapters consider a second broad source of concern, that ageing enhancement violates egalitarian distributive obligations.

Chapter 3: The Egalitarian Objection – The temporal subject

Chapters 1 and 2 argued that there is no obvious problem for ageing enhancement related to the meaningfulness or value of life. Chapters 3-6 consider the question of who benefits. By its nature, ageing enhancement will have greater benefit for people the older they are,[16] and will have no benefit for almost all young people, who do not undergo physical ageing in the sense of physical decline.[17] A widespread programme of ageing enhancement could involve significant dedication of health resources to benefitting middle-aged and, particularly, elderly patients. The second central concern that I address is that this fails an egalitarian distributive requirement, because it involves extending and improving the lives of elderly rather than young patients (e.g. Callahan, op cit; Pijnenburg and Leget, 2007; Temkin, 2008: 205; Turner, 2009: 24). For simplicity I will predominantly focus on the life-extending benefits to elderly patients, since that is the target of most forms of the Egalitarian Objection.

As with the Meaning Objection, I will begin with a rough formalised version of the objection:

P6 Ageing enhancement will require considerable resources to be spent on extending the lives of elderly people.

P7 We should apply an egalitarian principle to healthcare distribution. We have strong moral reasons not to support (and perhaps to restrict) practices that violate that principle.

P8 From P6, ageing enhancement violates the best egalitarian principles.

C2 There are strong moral reasons for governments not to support (and perhaps to restrict) ageing enhancement.

The next four chapters focus predominantly on various ways of filling in the first part of P7, i.e. what our egalitarian principles should be, and hence whether ageing enhancement really does violate them. I largely focus on the weaker version of P7 (and hence C2) that says only that the state should not *support* ageing enhancement, although I consider the idea of restriction in Section 6.3.3. I will suggest that the best egalitarian principles do not entail that we should not pursue ageing enhancement, though they do suggest some constraints on that pursuit. However, these constraints are not best understood as a complaint about elderly patients benefitting instead of young patients, as the Egalitarian Objection typically has it.

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[16] Olshanksy et al (2006) suggest that "If we succeed in slowing aging by seven years, the age-specific risk of death, frailty, and disability will be reduced by approximately half at every age". Since these risks increase with age, people will benefit more the older they get. And the life-extending prospects of ageing enhancement will almost (see fn 17) exclusively benefit elderly people.

[17] I say 'almost' because the rare, devastating syndrome progeria has been linked to an accelerated ageing process among very young people. See e.g. Burtner and Kennedy (2010).

Some advocates of the Egalitarian Objection seem to assume that once we espouse any commitment to egalitarianism, we can see automatically that justice demands that we prefer saving younger lives to older lives. But while some egalitarian principles deliver that conclusion, others do not. This also means, however, that proponents of ageing enhancement should not focus only on those egalitarian principles that most obviously support the Egalitarian Objection. For instance, one objection to egalitarian arguments against ageing enhancement is that even if equality is valuable, it is not sufficiently so to justify denying treatment to the better off when that denial will benefit nobody (see e.g. Harris, 2002b: 290; Davis, 2004). But a different egalitarian claim might say only that we should not pursue ageing enhancement because our resources and attention could instead go to the care of younger patients. This demands that we avoid ageing enhancement only when we can benefit others instead, and so is not vulnerable to the Harris-Davis objection. As such, it is not enough to focus on just one form of egalitarian theory either in defending or resisting the Egalitarian Objection. Both objection and responses need to engage with substantive issues in egalitarian political theory before we can reach a conclusion either way.

Section 3.1 outlines three possible egalitarian distributive principles. Section 3.2 notes a complication regarding the temporal focus with which we ought to be concerned in applying such principles. I suggest that we have reason to care about egalitarianism both across lifetimes and relative to particular times, and that this requires distinct principles for these temporal foci. A time-relative concern will, in the following chapters, provide significant complications for many versions of the Egalitarian Objection. Section 3.3 rejects two Rawlsian views that claim to capture our time-relative concern without requiring a distinct principle. These are Daniels' Prudential Lifespan Account (3.3.1) and Lazenby's development of that account (3.3.2). These accounts insist both that time-relative concerns are derivative on our lifetime concerns, and that understanding this supports some age-based rationing of healthcare. Since I argue in Chapter 6 that a distinct concern with the best time-relative egalitarian principle should affect how we implement the best lifetime egalitarian principle in a way that is relevant to the Egalitarian Objection, it is important to explain why a view of this kind will not work. Although I focus on the detail of Daniels' and Lazenby's accounts, my comments apply more widely to attempts to make time-relative concerns derivative on lifetime concerns.

Chapters 4-6 outline a position within this framework, while discussing problems with alternatives, and consider some versions of the Egalitarian Objection that seem explicitly to take an alternative position. I will suggest that the most plausible egalitarian theory does not in fact have the implications that the Egalitarian Objection supposes based on the observation (in P6, above) that ageing enhancement will predominantly benefit elderly patients; but egalitarian principles do have implications for how, and under what conditions, we should engage in ageing enhancement, among other medical interventions.

This thesis does not attempt to develop a complete theory of allocation for healthcare resources. Although I will make some suggestions and assumptions about the concerns that should guide our healthcare allocations, both at the level of quite abstract[18] theory and more concrete consideration, my initial focus is what I take to be the central assumption of the Egalitarian Objection: that whatever our broader theory of healthcare allocation, we should have distinctive principles for allocations to elderly patients, whether in considering competition between individual patients, or broader funding decisions.

3.1 Equality, priority, sufficiency – the principles in abstract

In philosophical usage, egalitarianism covers three distinct distributive rules: equality; priority; and sufficiency. To avoid confusion I refer to a specific concern with equality as 'equalitarian' rather than egalitarian. Where possible I remain neutral about the egalitarian currency, side-stepping the debate between those who say our fundamental concern should be with shares of resources (resourcists), with levels of welfare (welfarists), or with the opportunities people have (opportunists),[19] instead using $\sum$ as a generic. At some points it is necessary to abandon this neutrality.

Some egalitarians claim that distributions which comply with the correct egalitarian principle should be understood as having impersonal value; a particular distribution can be better than another where some of that additional value does not make the distribution better for any individual (e.g. Parfit, 1997; Holtug, 2006), and so is impersonal. If some amount of $\sum$ is transferred from the better off to the worse off, so that the total amount of $\sum$ remains the same but the distribution changes, such theorists claim that the value of the distribution has increased, even if the value gained by the worse off is exactly matched by that lost by the better off. I will argue in Section 5.1 that this way of thinking opens up some theories unnecessarily to problematic objections. I speak instead of individuals having particular claims on each other. There is no need to speak of a distribution being 'worth more' than another; all we need say is that people have claims whose strength depends partly on egalitarian considerations.

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[18] Mills (cited in Shelby, 2013) objects to any use of abstract or 'ideal' moral theory on the grounds that the conceptual tools put to use in ideal theory are inherently distorted by actual injustice in society, and that addressing ideal theory is a distraction from the real issue of dealing with a non-ideal world. While I accept the thought that our central concern ought to be 'real-world' application, I agree with Shelby that ideal theory is a necessary precursor to identifying some forms of injustice, and that abstract considerations may affect how we ought to implement allocations that correct for injustice. This will be apparent in Chapter 6.

[19] Sen (e.g. 1999: 18-20; 2010: 18-19) suggests that we should be concerned with 'capabilities', which are distinct from opportunities. Since the distinction is subtle and complex, and because I am largely avoiding the question of currency, where I do make specific remarks on currency the distinction is not of any significance.

I will now outline the three positions. Equalitarians recommend an equal distribution of ∑; those who have less than an equal share have claims against the rest of us not to be worse off than we are. The better off may have separate claims – e.g. claims of ownership – that reduce the force of these distributive claims. But even if they outweigh them, they cannot nullify them.

Although egalitarian principles focus primarily on claims *to* benefits, they should also have implications for the justification of taking goods from people. For traditional equalitarians, the further one is above the line of equality, the more justification there is to take some of that excess for egalitarian purposes.

Prioritarians say that people have greater claims the less they have. While equalitarians are concerned with one's position relative to others, prioritarians are fundamentally concerned with what one has in absolute terms. Given the following distributions (where S and R are individuals or groups, and D_1 and D_2 are different possible distributions of ∑):

	S	**R**
D_1	5	5
D_2	7	10

prioritarians have greater concern for both S and R in D_1 than for either in D_2. The egalitarian is most concerned with S's position in D_2, and may not be at all concerned with D_1.

One's absolute position is in some respects affected by one's relative position, so prioritarians cannot be indifferent to inequality *per se*. But the fundamental focus of the prioritarian concern is the absolute position; a concern with relative positions is important only insofar as it affects absolute positions. People have stronger claims to our help the worse off they are; correspondingly, the better off people are, the more justified we are in taking from them in order to fund redistribution.

Sufficientarians are also absolutists. They say it is morally significant whether people have 'enough', i.e. that they breach some threshold. Below the threshold, claims are discontinuously stronger than those above the threshold. The strength of justification for taking from people who are above the threshold will depend on whether there are multiple thresholds or only one, but can be subject to a variety of rules e.g. prioritarianism, or maximisation of group utility.

The distinction between sufficientarians and prioritarians needs clarification, or perhaps legislation. Casal (2007: 297-298) says that sufficientarianism is comprised of two theses: "the *positive thesis* stresses the importance of people living above a certain threshold...the *negative thesis* denies the relevance of certain additional distributive requirements". Prioritarianism is concerned with a continuum: the worse off you are, the stronger your claims, with no

thresholds prompting discontinuities. What should we say about a position that endorses the positive sufficientarian thesis, but not the negative, i.e. a position that states there is something special about a threshold(s), but which does not deny other important distributive requirements? Shields (2012) claims that a position can be sufficientarian, but endorse only Casal's positive thesis; sufficientarianism on this view is defined by a concern with thresholds, not a rejection of other distributive principles, even prioritarian ones. However, one might equally argue that prioritarians can introduce discontinuities into their theory, such that the rate at which claims get stronger as one becomes worse off changes as we cross thresholds. Indeed, this seems to be Casal's claim when she says that a concern with sufficiency can "supplement" a more general prioritarian thesis (318). Such a distinction assumes a principle is only sufficientarian if it endorses both the positive and negative theses. The positive thesis alone can be incorporated into prioritarianism, albeit in a way that many prioritarians would reject.

There is clearly a danger here of those who hold substantively similar views talking past one another due to an attachment to different labels. I will follow Shields' categorisation over Casal's, but I think there is plenty of substantive agreement between the two positions. The distinctive aspect of sufficientarianism seems to me to be an insistence on thresholds. Moreover, there is evidence that Frankfurt (1987), whom many see originating modern sufficientarianism, only holds the negative thesis with regard to an upper threshold, but also has some concern for considerably lower thresholds such as mere survival.[20] Whatever one thinks about this multiple thresholds view, it implies that even in its original form, sufficientarianism is not committed to anything like the strict negative thesis that Casal implies. My discussion relies on this distinction only in form, not substance; those who see the negative thesis as essential to sufficientarianism should substitute terms accordingly.

3.2 The temporal subject

Many egalitarians seem to assume, at least implicitly, that egalitarian principles apply solely over lifetimes. On such a view, equalitarians, for instance, would aim for people to have equal shares of $\sum$ over the course of their lives, allowing inequalities at particular times so long as they balanced out overall. But our egalitarian concerns at least seem to be engaged by people's conditions at particular times too. S is currently badly off, and R is doing well, though S will have the better life overall. Pure lifetime principles mostly say we should prefer to benefit R, and have no reason to prefer S. R, after all, has the worse life overall.

[20] Frankfurt (38) discusses the idea of contentment as being 'not much interested in being better off', which certainly implies something like the negative thesis. But he criticises equalitarianism as sometimes being inimical to very low thresholds like survival (31), making no mention of anything like the negative thesis. It would be puzzling for him to discuss the idea of contentment if he had already established that we should have no concern for distributions above mere survival, as applying the negative thesis to such a low threshold would imply.

This conclusion does not depend on knowledge that S's condition will improve again. As McKerlie (1989a) notes, it may be that S's good-quality life is all in his past; so long as we get the right lifetime result, this is of no concern to the pure lifetime egalitarian. While S's better life does seem a consideration in favour of benefiting R, it fails to capture the whole story. S is the one who is currently worse off. This latter, time-relative concern is not merely a concern with the present; if we can predict that this situation will occur in the future, S's position at that future time seems to generate a claim to avoiding that position, which clashes with R's claim on the basis of lifetime egalitarianism. A pure lifetime theory cannot accommodate such a concern, except derivatively on how it affects lifetime chances.

McKerlie (1989a; 1997; 2001; 2013) outlines the problem most clearly with regard to equalitarianism. Focusing on lifetime equality ignores even quite drastic inequalities at particular times, so long as these inequalities balance out overall. This also applies to lifetime versions of prioritarianism and sufficientarianism; both will automatically prefer the person who is absolutely worse off in lifetime terms over the person who is worse off – even very badly off – now.[21] McKerlie suggests that this ignores a morally compelling aspect of our distributions; we have egalitarian reasons to help people at particular times. As Bou-Habib (2011) puts it, a pure lifetime distribution seems committed to ignoring 'hardship'. Chapters 4 and 6 suggest some more theoretical reasons to be concerned with particular times as well as lifetimes; but for now, I suggest that there is something compelling about the concern with ignoring distributions at particular times. As much as we should be concerned with how lives go overall, we should also consider how people fare at particular times, independently of how this affects their lives.

Still, it is also important to avoid a monocular time-relative principle. Bou-Habib notes two further distributive considerations that speak against such a view. Responsibility might play a role in distribution; it may be fair for shares of $\sum$ to deviate from an egalitarian distribution if individuals could have avoided those deviations by their own actions, and unfair to expect others to pay for the correction of such deviations. A pure time-relative view cannot accommodate the thought that exercises of responsibility at particular times should affect claims later on.

People can also justly demand compensation for past inequity. Pure time-relative views cannot recognise the justice in compensating people for inequity that occurred at previous times. Time-relative views also cannot explain the attraction of sharing necessary inequalities over time. Consider a situation where, at each of two times, someone must take on a considerable burden. Consider D_3 and D_4, where t-numbers are particular times:

[21] This is not strictly true for all lifetime sufficientarians in all cases; if neither S nor R have a sufficient life, but S could have one if we benefit her now, those who aim to maximise the number of people with sufficient lives will prefer S.

D_3

	t_1	t_2
S	5	10
R	10	5

D_4

	t_1	t_2
S	5	5
R	10	10

In both cases, time-relative equalitarians can identify injustice in each segment (since both are unequal at particular times), where lifetime equalitarianism would see no problem in D_4. But pure time-relative equalitarians cannot identify a further unfairness in D_4, in the fact that S suffers a burden twice. Because they focus on particular times in isolation, they cannot recommend that S and R share the burden, as in D_3. Even if both distributions are flawed, it is better that burdens are shared, even if that sharing takes places across different times. In D_4, S can object that it is R's turn to take on the burden. The idea of turn-taking thus seems a fundamental problem for a pure time-relative view.

The other side of compensation is intrapersonal. Pure time-relative views cannot accommodate the fact that we sometimes take on burdens in order to accrue greater benefits later on, or enjoy benefits now in the knowledge that we must pay later. A time-relative principle sees the burden at a particular time, notes that there is no corresponding benefit at *that* moment, and corrects for it, even knowing that a fully compensating benefit has already occurred or will come later. It is arbitrary, and contrary to our psychological makeup, to ignore the sharing of burdens across time, both interpersonally and intrapersonally. States and other distributive institutions should aim people's lives go well, not just to care about how people are at particular times.

3.3 Rawlsian attempts to defend a pure lifetime theory

One conclusion to draw from this is that we need two distinct principles – one to cover lifetime fairness, and the other time-relative fairness – and some sense of how they relate to one another. That is my view, and Chapters 4-6 undertake that task. But one might instead aim to address time-relative concerns without requiring a distinct principle, by showing how we can plausibly meet them even though they remain derivative on a lifetime principle. The remainder of Chapter 3 considers two such accounts, and explains why they fail: Daniels' Prudential Lifespan Account (developed across 1985; 1988; 1996; 2008) and Lazenby's (2011) view, developed from his criticisms of Daniels. Both offer some support for the Egalitarian Objection, since they conclude that (at least in some circumstances) it is right to set distinct efficiency tests for treatments that will predominantly extend the lives of elderly patients.

Both Daniels' and Lazenby's arguments are detailed developments of a more generic Rawlsian view. This view says that we should decide what people have justice-related claims to across

their lifetimes by considering what they would prudentially choose in Rawls' original position. The original position imagines citizens deliberating about the preferred structure of their society under a 'veil of ignorance', which obscures facts about themselves that would influence their decisions, but are not morally relevant; put simply, the thought is that what is fair is what people would choose for themselves if they thought that they might occupy any position in society. Fairness thus turns out to be a kind of rarefied prudence. The views I consider take this idea a step further; deliberators in the original position do not only consider the basic structure of society, but entitlements at different stages of one's life. The thought that unites both views is that since a prudent agent under the veil of ignorance would prefer to prioritise healthcare access in her youth, we are morally justified in some circumstances in actually exercising such priority. The deliberators' imagined preference is assumed to reflect something axiologically and morally relevant about the structure of a life: that the young have had less than the old by dint of their age.

I agree that differences in lifetime chances are morally significant, although this does not support rationing by age, as I will argue further on. More relevantly for this chapter, the relevance of lifetime disparities is not the only feature of a distribution that deliberators would pick up on. I will argue that a rationally prudent distribution under the veil of ignorance ignores morally relevant time-relative features because we have obligations of justice to people who end up in *ex ante* unlikely positions, such as the very old. I will also suggest that unless we beg the question against a time-relative principle, deliberators behind a Rawlsian veil of ignorance cannot rule out the possibility that they are already old. This fact changes how they would view the distribution, and reflects another factor of equal moral relevance: that we have justice-relevant concerns about how things go for us at particular times that are not merely derivative on a concern that our lives go as well as possible.

3.3.1 The Prudential Lifespan Account

Daniels' Prudential Lifespan Account (PLA) starts from the claim that disparities that exist between age groups differ from those that hold between other groups in society because most of us will belong to multiple age groups over our lives. As such, Daniels reconceives interpersonal age group distribution as an intrapersonal prudential decision (1996: 259) about how to distribute one's fair share of holdings across a lifetime. So long as all individuals are subject to the same distributive pattern over their lifetimes, differences at particular times between people of different ages need not be inequitable. Since being worse off at particular times can be a prudent choice if it makes one's life go better overall, it would in fact be against everyone's interests to insist on equality at all times; this aligns with Bou-Habib's compensation concern. Daniels thus makes time-relative concerns derivative on a concern with lifetimes.

PLA acknowledges time-relative concerns by claiming that, while people may choose to make sacrifices at various times, the prudent individual would not allow herself to fall into hardship at

any particular time (1988: 78). In fact, Daniels has at some points made the stronger claim that a prudent individual would ensure for herself a normal 'age-relative' opportunity range at each stage of her life (1996: 214), which reflects what Bidadanure (2013: 26) calls the "age-specific needs principle": the idea that all of us "must have sufficient resources throughout our lives to be able to do the things that we may want to do". This intrapersonal distribution is constrained by an independent, general interpersonal distribution that assigns fair lifetime shares to each individual, on grounds independent from the intrapersonal question (1996: 263-264), because interpersonal conflicts other than those between age groups cannot be reduced to the intrapersonal. As Daniels says (ibid: 260), PLA is concerned with budgeting resources across a lifetime, while the general distributive principle provides the budget within which that takes place. A concern with particular times is derivative on the idea that a prudential agent who is concerned with her *life* going as well as possible will have particular views on intrapersonal distribution, so there is no need for a distinct time-relative principle.

Although Daniels does not claim that rationing by age is always acceptable, he subjects health gains for those who have reached 'old age' to greater stringency; a particular health gain (e.g. extending a patient's life for *n* years) for an elderly patient must be more cost-effective than the same gain for a younger patient. Resource expenditure is constrained by what a prudent individual would set aside for herself at a particular age from the position of having to plan for her whole life (more on this in a moment). From this perspective, we would prefer to improve our chances of reaching old age, at the cost of reducing our chances of extending old age (2008: 178). If we must decide between these two kinds of claim we are justified in rationing healthcare expenditure on the basis of age in favour of younger patients with – and this has important implications for ageing enhancement – particular focus on reduction of services for elderly people, as opposed to all mature adults. If investment in ageing enhancement compromises our ability to fund equally or even somewhat less efficient treatments for younger patients, and we could not fund both, we should not pursue it.[22]

A concern one might raise about simply plugging age-based allocations into the Rawlsian machinery is that the structure of ageing appears to allow certain probabilistic assumptions that seem morally irrelevant. The hypothetical deliberators behind the veil of ignorance do not know how old they are, but they have general knowledge about how ageing works; they can, one might think, reason that it is extremely unlikely that they will survive to 100, and so gamble in allocating very few resources to that age. But that does not by itself justify us in restricting healthcare access for centenarians. Even if it is right to prefer the young to the old, it is surely not right to leave the very old with next to nothing; but a risk-friendly deliberator in Daniels'

[22] Of course, if extremely effective ageing enhancement became possible, it might no longer be prudent to have this preference. But if it is prudent given current healthcare technology, it would presumably also be so for the lower end of ageing enhancement effectiveness.

scheme might do just that on the assumption that his odds of reaching old age were quite low. This seems to suggest that our concern with particular times is at least somewhat distinct from a prudential concern with lifetimes.

Daniels might insist that it would not be prudent to allocate so little even to a stage of one's life that one might not reach. However, this view of prudence is not universal. Since some conceptions of the good may be oriented to specific life stages, there is no reason to assume that a prudent allocator would choose roughly equal shares across a life, even if they were guaranteed to reach 100. Some might sacrifice vast opportunities and even welfare at a particular age if it would improve things across their entire life. Others may be more risk-averse, preferring to minimise their risk at any one time even at an overall cost to their lifetime welfare.

Daniels (2008: 175) now recognises this problem, and supplements the prudential allocation model with the idea of a fair deliberative process. Still, if some reasonable versions of prudence allow for hardship at some points in life, Daniels' theory can only rule out allowing hardship for particular ages on the basis of reasons other than prudence. One such reason would be a distinct concern with time-relative distribution; but of course, that is precisely the view that the Rawlsian strategy aims to avoid.[23]

In fact, Daniels tries to avoid the possibility of probabilistic gambling by having deliberators make what Lazenby calls the "complete lives assumption" (CLA), that they will live through all stages of life, starting from birth, and that everyone will have an equal lifespan. CLA ensures that deliberators have no probabilistic bias towards particular ages, which would make them prudentially preferable in a morally arbitrary way.[24] Without such worries, perhaps it is more plausible that prudential deliberators would provide at least some minimum security for old age. CLA also grounds the idea that individuals of different ages can represent different *stages* of a single individual's life for Rawlsian deliberators. If we know that we must all live through the same stages, it is clear how we might see ourselves in people who are currently at a different stage.

But CLA is extremely problematic. First, Daniels faces a problem in defining a complete life, i.e. for how long deliberators should assume that they will live. Wherever we set the threshold, probabilistic calculations of the kind CLA is meant to avoid creep in above that threshold; if the complete life is eighty, those over eighty will be vulnerable to the problems outlined above. But if we set it sufficiently high to avoid this worry – say, as long as any human has ever been known to live – its status as a prudential calculation is questionable. The vast majority of us will not in fact live so long. This raises the question of why Daniels stipulates CLA in the first place;

[23] McKerlie (1989b) makes a similar criticism.

[24] This is similar to Rawls' stipulation (1996: 311) that deliberators in the original position should not know e.g. the religious makeup of their society since this information would allow them to make probabilistic gambles about their likely religion.

perhaps it is motivated by independent concern with people's situations at particular times, and a recognition that Rawlsian prudence will not give us the 'right' result in that regard. But if this is the motivation, better surely to make it explicit, and have a distinct time-relative principle.

Lazenby raises another problem. CLA is both a simplifying assumption, which must ultimately be abandoned to apply Daniels' theory in practice, and a framing assumption that plays a fundamental role in shaping the theory and its conclusions. Simplifying assumptions are entirely legitimate tools that help us focus on particular aspects of a problem. But if the abandonment of an assumption fundamentally changes the nature of a problem, its role is not to simplify but to distort. As Lazenby (333) puts it "Daniels' solution appears successful only because it has avoided the central problem it set out to answer": intergenerational distribution.[25]

Once we abandon CLA, it is no longer reasonable for deliberators to assume the intrapersonal view that grounds PLA. As Lazenby (332) puts it, CLA involves an idealisation not just of the society, but of the subject to whom the theory is meant to apply. Daniels' theory relies on individuals seeing members of other age groups as representative of other stages of their own lives; when we set up distributive principles based on CLA, young people know that the same principles that currently take money from them via taxation to benefit elderly people will fund them in their old age, and elderly people can rationalise their limited access to healthcare by knowing they benefitted from such a disparity in their youth. Lifespan inequality makes at least the first part of this implausible. A young person cannot reasonably assume that allocations to an older generation are equivalent to allocating shares to herself in the future. Indeed, young people suffering from terminal illnesses know with certainty that the current elderly are not equivalent to their own futures. But that assumption provided the ground for transforming the interpersonal problem into an intrapersonal prudential issue. Relaxing CLA changes our conception of the subject to such a degree that decisions made under the initial conception cannot apply to practical decisions made under the latter conception.[26]

So PLA fails on its own terms, and cannot justify a version of the Egalitarian Objection. It also fails to justify making time-relative concerns derivative from lifetime concerns, because it mischaracterises our prudential concern with particular times, and anyway fails to draw the

[25] See also Bognar (2015: 258-259).

[26] Since Daniels (2008) has expanded the scope of what counts as a prudent distribution, one might think we could justify giving more to those who are likely to die young even after abandoning CLA, since some prudential distributions will allocate the bulk of an individual's share to their youth. But a terminally ill young person's allocation preferences derive not from a youth-oriented vision of the good, but from knowledge that they will not reach old age. Even if the revised PLA is extremely relaxed about what counts as a prudent distribution, it cannot justify individual allocation based on grounds that contradict CLA, which rules out giving someone a larger share in their youth 'because they are terminally ill'. Yet this is precisely the reason that we should allocate more to some people in their youth.

necessary connection between prudential concern and justice. The next section considers whether a Rawlsian view can work without CLA; Lazenby's response to the worries he raises is to embrace the kinds of prudential calculations that worry Daniels – and which CLA was supposed to avoid – on the grounds that they reflect something morally relevant: that those who will die young will be among the worst off in lifetime terms, and so deserve preferential treatment on a Rawlsian view. I will suggest that this mischaracterises both the likely outcome of Rawlsian deliberation and the moral relevance of age, and that it highlights weaknesses in the Rawlsian account in general when confronted with significantly different healthcare needs.

3.3.2. Calculation, and asymmetric identification

Lazenby claims that rather than trying to reduce intergenerational distribution to intrapersonal prudence we should simply apply Rawlsian theory to intergenerational distributions in the same way as we should distributive conflicts between other groups. Rawls' 'difference principle' tells us to allow inequalities in lifetime holdings of primary goods (goods that one will want more of whatever one's life plan) only if they benefit the worst off, or if they are necessary to protect a system of equal liberties for all citizens (1999: 65-66). Deliberators in Rawls' original position – not knowing where they actually stand in society, or even how likely they are to occupy any particular standing because of the veil of ignorance which keeps such information from them – would prefer to play it safe and make their worst possible position as good as possible, within these limits.

Applying these ideas to healthcare, thinks Lazenby, also recommends subjecting a higher efficiency threshold for life-extending medical care for the elderly, at least when this competes with life-extending care for the very young. Those who will die in their youth are among the worst off in lifetime terms; because they will live less long, they will typically have less of various morally relevant goods than others in lifetime terms. If inequalities must benefit the worst off, we should oppose ageing enhancement in favour of extending young lives wherever possible. This in turn implies the strong version of P7, that we should oppose inequalities in lifespans unless they benefit those who will die young, even if failure to pursue them benefits nobody.[27]

But Lazenby does not acknowledge the fact that the difference principle, applied to healthcare, recommends a similar stance for many other kinds of medical treatment, so long as these do not benefit the worst off. Focusing on this fact highlights how much more problematic it is to introduce health needs to a Rawlsian scheme than either Daniels or Lazenby assumes. As Pogge (1989: 181) puts it, Rawls "simply leaves medical need aside" in his theory of distributive justice.

[27] It is worth emphasising that Lazenby does not suggest that these individuals are among the worst off directly because of their poor health. This would be an illegitimate application of Rawls' theory, for the difference principle applies only to "social and economic inequalities" (1999: 53). Lazenby's point, rather, is that poor health here leads to the relevant inequalities in a lifetime sense because people who die young have less time to experience relevant goods.

And rather than leading to Lazenby's suggestion, introducing medical need causes as significant a problem for Rawls' theory as abandoning CLA does for Daniels'.

Rawls' discussion of inequality assumes that we will be able to significantly benefit the worst off (i.e. that their position can either be directly improved or compensated), such that the worst off are in principle capable of occupying other positions in society. But since the worst off include very young terminally ill patients,[28] neither assumption is true. Even ignoring the pain and physical discomfort they suffer and focusing solely on social and economic goods (see fn27), the situations of some terminally ill people can only be marginally improved, if at all, and cannot be compensated for either. Allowing inequalities that do not benefit them need not alienate them from society, or reduce their competitive advantage; the most debilitating terminal illnesses already remove their sufferers to some degree from such concerns, particularly if they are very young. Rawls' sense that inequalities that do not respect the difference principle would test "the strains of commitment" (159) of the worst off thus seems misplaced when we consider terminally ill people who simply do not operate within society in the competitive way that is Rawls' paradigm. Even if it is justified for the worst off in Rawls' imagined society to feel begrudged at inequalities that do not benefit them, it is inappropriate for the terminally ill to have the same reaction, and to regard as socially unjustified the good fortune of those who will live into adulthood.

Lazenby's extension of the difference principle would thus minimise inequalities in lifetime primary goods that do not improve the position of people whose position cannot be improved.[29] Given the state of the worst off, this includes a great deal of our current spending. Some inequalities are such that attempts to eliminate them would undermine the basic ability of a society to function, or lead to a shortage of medical staff; perhaps the terminally ill would be even worse off in these cases, rendering these inequalities justified. Given the lexical priority of liberty, inequalities whose elimination would require infringement of basic liberties are also acceptable. But the degree to which the difference principle would tie the fortunes of everyone to the position of the terminally ill is still overly taxing,[30] and Rawlsian deliberators would not choose it. If the very worst position they could occupy is both such that normal social considerations in favour of pure equality do not apply, and they can guess that their odds of such a position are quite low,[31] they would not tether all their possible outcomes to such a

[28] See Campbell (1994) for details both of progress in helping these patients, but also the extant limitations and additional ethical issues.

[29] Lazenby might suggest an alternative reading of the difference principle (see e.g. Van Parijs, 2003: 209), where if we cannot help the worst off we look to the next worst off ('leximin'). This will not help, since the position of some terminally ill people can be improved very marginally, but at great cost.

[30] Arrow (1973: 251) makes a related criticism.

[31] They will have no precise odds, but since they are permitted to assume that they live in a functioning society, they can assume that most people are not terminally ill.

position. The existence of severe illness should thus prompt us to abandon the difference principle. This is not to say that there should be no preference towards those who will have worse lives overall; Chapter 5 defends just that stance. But we can show some preference without such an absolute preference towards the worst off. Gains to the lifetime worst off in health terms, while important, can be outweighed by gains to others.

Of course, this leaves open the possibility that the mechanism of the original position is still appropriate – even if it no longer recommends the difference principle – and might still advocate more stringent conditions on accessing healthcare for elderly patients. Lazenby's second reason for preferring to extend young lives appeals more to Daniels than to Rawls. Once we abandon CLA, Lazenby suggests that deliberators in the original position can – despite being behind the veil of ignorance which obscures facts about their age from them – reason from general facts about ageing to the conclusion that they are more likely to live through youth than old age, and make corresponding probabilistic adjustments to their prudential allocation, preferring younger ages.

But this depends on an incomplete abandonment of CLA. CLA is made up of two components – that all individuals will live to the same age; and that all live through each stage of life – and Lazenby's analysis works only if we abandon only the first. If we also drop the second, deliberators cannot assume that it is more likely they will be young than old. When the veil of ignorance lifts, a particular deliberator may find that she is already old. This would make her youth *even more* prudentially irrelevant to her than very old age would be if she turned out to be young; while young people may reach old age, old people will never again be young. Without the assumption that deliberators must live through all parts of whatever lifespan they have, they cannot assume that they are more likely to find themselves to be young rather than old when the veil of ignorance lifts.[32]

[32] To further demonstrate this: If a deliberator S is fifteen, say, each further age (A_n) has some positive value in her prudential calculus. If S is eighty, many ages have *no* prudential value for her, since they have already passed: someone at A_{80} has no prudential reason to allocate resources to A_{15}, so older ages are included in more prudential plans than are younger ages. It is still true that A_{80} has a lower priority for the fifteen year old than A_{15} does, since there is some chance that she will not survive to eighty. But it still has a greater priority than A_{15} has for the eighty year old, since there is *no* chance she will live through fifteen. With no knowledge of her actual age, S should in fact come up with a series of prudential allocations, one for each age she could be. Each age's weight overall will be a function of the weights it gets in each plan. Since A_{15} receives zero weighting in most plans, it will be near the bottom of the rankings. A_{80} features in many more plans, but its weighting is quite low in many of them. The most favoured age will be one that appears in many plans but also is quite likely to be reached from many plans.

Lazenby might think that because everyone who is eighty was once fifteen, but not all fifteen year olds will make eighty, there are more total people in A_{15} than A_{80}, so we can assume an unequal probability, skewed towards younger ages, of ending up in any particular age group. But while more people will be

Still, Lazenby has another, somewhat independent argument for prioritising young people, which may justify only abandoning part of CLA. This would mean that deliberators should reason as if they will begin at the beginning of whatever lifespan they end up having, but not that they will live for the same length of time as everyone else. The ground for this assumption is Lazenby's claim that although young people cannot plausibly identify their own old age in current elderly people (as Daniels assumes) because they may never be old, old people can identify their own youth in current young people, because they have necessarily been young.

In many societies, there are significant changes across generations in the general level of wealth, and more specifically in health technologies. Further, increases in lifespan mean that the demographic structure of society changes, and the socio-economic context for transfers to young people in the past was very different from the current context. Young people a century ago would simply not have faced so much competition from elderly patients, but they would also not have benefitted from a wealth of medical advancement and social infrastructure that improve health outcomes and save lives. Just as Lazenby rightly points to the strain in young people seeing themselves in old people, there is a psychological strain on elderly people to see the current youth as merely benefitting from transfers in the same way, and the same context, as they did in their youth. This is not to say that we cannot use the fact that elderly people benefitted from a scheme of transfers as part of the justification for its continuation; but given a changing profile of claims and possibilities, this is not a sufficient justification alone. As such, it seems to me unlikely that Rawlsian deliberators would generate the conclusion that Lazenby assumes of a strong preference for transfers from the old to the young. Moreover, since he has abandoned the first part of CLA – that deliberators assume they will reach old age – it is unclear why Lazenby thinks he can justify even minimal provision against hardship for the very old. In this regard, he faces the same problem as Daniels does in explaining our concern with hardship at particular times in a way that is properly derivative of his lifetime principles.

3.4 Summary

I have outlined three egalitarian principles, suggesting that both the Egalitarian Objection and its opponents must consider further principles than strict equality. I also suggested that our egalitarian concerns push us to adopt distinct principles to cover lifetimes and particular times.

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fifteen than eighty in all of history, this tells us nothing about the probabilities involved in a Rawlsian deliberator's assessment. Deliberators are in a particular society, at a particular time. Our deliberator could be in a society which has been subject to significant demographic ageing, with more old people than young; so she cannot 'work out' her age based on these assumptions. Of course, if deliberators must assume the second part of CLA, they *can* assume it is more likely that they will be fifteen than eighty. As the following paragraphs suggest, however, this assumption is unmotivated.

It should also be clear that this probabilistic assumption reflects nothing of moral relevance, and is precisely the kind of morally irrelevant calculation Rawls wants to avoid with the veil of ignorance.

I considered two accounts that challenge this latter claim, and which might motivate versions of the Egalitarian Objection on the grounds that such a policy would be chosen by hypothetical deliberators in a Rawlsian original position. I argued that flaws in these accounts in fact reveal significant problems in the Rawlsian position's ability to accommodate questions of ill health, and so such justifications of the Egalitarian Objection ought to be rejected.

I also considered these accounts' attempts to make our time-relative concerns derivative on a pure lifetime principle, in opposition to the position I will advance in Chapters 4-6. Daniels' Prudential Lifespan Account had various flaws, most pressingly its inability to drop idealisations about agents that make it inapplicable to reality. Lazenby's response to Daniels also relies on an overly simplified view of individuals. The best way to explain our concern with particular times is not only insofar as they contribute to our having the best life overall. A theory that sees lifetimes merely as a succession of moments ignores a fundamental aspect of how we exist as psychological agents. But so does a view that makes our concern with particular times reliant on our desire to have as good a life as possible. We care about particular moments for their own sake, and no less fundamentally than we care about our lives as a whole. This is sufficient motivation, in the absence of plausible alternatives, to adopt a mixed strategy when thinking about egalitarianism.

Chapter 4: The Egalitarian Objection – The time-relative principle

Considering three egalitarian views at lifetime and time-relative levels generates nine positions:

Lifetime \ Time-relative	**Equalitarian**	**Prioritarian**	**Sufficientarian**
Equalitarian	Equal lifetime shares; equality at times (EE)	Equal lifetime shares; claims depend on absolute position at particular times (PE)	Equal lifetime shares; special claims to those who lack enough at times (SE)
Prioritarian	Greater priority the worse one's life is; equality at times (EP)	Greater priority the worse one's life is; claims depend on absolute position at particular times (PP)	Greater priority the worse one's life is; special claims to those who lack enough at times (SP)
Sufficientarian	Ensure 'good enough' lives; equality at times (ES)	Ensure 'good enough' lives; claims depend on absolute position at particular times (PS)	Ensure 'good enough' lives; special claims to those who lack enough at times (SS)

Chapters 4 and 5 argue respectively for the time-relative and lifetime components of SP against alternatives, while Chapter 6 discusses how those components relate to one another, and the implications for ageing enhancement. This chapter considers time-relative equality (Section 4.1); priority (4.2); and sufficiency (4.3), advocating the latter.[33] My argument for a sufficientarian

[33] Perhaps different distributive principles are appropriate for different goods. While I will discuss a range of goods and argue that they are covered by time-relative sufficientarianism, I do not address all possible goods. But if we have a plausible account that covers a central range of cases, a claim that some other

over a prioritarian time-relative principle relies on the idea that our distributive principles should respond to competing factors of hardship, responsibility and compensation, and that sufficientarians can best balance those concerns. Section 4.3.1 defends the primacy of hardship in our concerns, while Section 4.3.2 considers some further objections to the view, and outlines the idea of a threshold in greater detail.

4.1 Equality

A problem that is in my view fatal to time-relative equalitarianism emerges when we consider the length of the relevant stretches of time to which time-relative concerns attach. Recall that the motivation for adopting a distinct time-relative view is that lifetime egalitarianism is concerned only with balancing things across lifetimes, with no concern for apparent inequities at particular times. But as McKerlie notes (1989a; 1997; 2013), choosing any particular extended length of time as an object of fundamental concern generates the same problem: it gives us no reason to consider inequities *within* that length of time.

The only non-arbitrary option (aside from reverting back to a pure lifetime view) is that the relevant periods are 'moments', i.e. that the time-relative principle should apply at all points in time. And as McKerlie says (2013: 81), aiming for equality at all times seems overzealous. For welfarists, for instance, momentary equalitarianism says that people who are due to have somewhat painful dental appointments should have their appointments scheduled simultaneously, since this would reduce momentary welfare inequality. But there seems to be no reason whatever to "schedule suffering". Similar problems affect resourcists and opportunists; there is no reason to ensure that people have precisely the same opportunities or resources at all particular times. This implausibility does not affect the other two time-relative views, because they are only derivatively comparative. Hence, small changes in one person's behaviour or situation need not have meddlesome implications for others. We can have stronger reasons to help those who are worse off, or who have less than enough, at any particular moment, without having to co-ordinate collective behaviour.

Opponents of a time-relative principle might insist that even if time-relative prioritarianism and sufficientarianism do not demand scheduling, a focus on moments is still overly precise. Consider S, who is very well off for her whole life except for one moment, when she is very badly off, perhaps in a moment of intense agony. They might object that we do not have any stronger reason to benefit her during this one moment, given how good her life has been otherwise. I reject this view; S's claims to benefits are stronger with respect to that moment because, as I will argue, claims that stem from one's condition at particular times are

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goods are covered by a distinctive principle hold the burden of proof. Since all I need is that central cases include goods relating to health, especially the allocation of healthcare, I will not try to anticipate all possible cases.

independent of claims that stem from lifetime considerations. Note that this does not mean that S must be compensated at a later point in time. We are not concerned from a time-relative perspective with the moment of agony insofar as it makes S's life worse, only insofar as it affects that time.[34] Once the moment has passed, we can forget about it, except insofar as it contributes either to the lifetime distribution (considered separately by our lifetime principle), or to future moments. Our time-relative intervention is confined to a certain mechanism, e.g. pain relief rather than compensation. And the fact that S has a stronger claim at that time than at others does not mean we must do everything it takes to help her. There may be practical constraints that mean we typically ignore such brief agonies. But if we are able to provide appropriate aid to S in her moment of agony, we ought to do so. As such, I suggest that the focus on moments only provides a significant problem for equalitarians.

4.2 Priority

Time-relative prioritarianism says that being worse off at particular times gives people stronger claims at those times. An immediate concern is that this appears to prevent responsibility or intrapersonal compensation across times affecting the strength of claims. If S willingly forgoes a benefit at time t_1 in order to access a greater benefit at t_2, straightforward time-relative prioritarianism claims that, even though S's position at t_1 is incurred voluntarily, and she will be fully compensated, we have a stronger reason to benefit her. Yet one of the central reasons for recognising a lifetime rule in addition to a time-relative rule is the thought that people should be able to make cross-temporal sacrifices without affecting our obligations. At the very least, time-relative prioritarians need to say when responsibility and compensation make a difference.

An obvious response is to have the prioritarian principle apply in all cases except those involving compensation and culpability. This condones severe hardship in many cases, since it would punish not only those who are worse off, but also those who are very badly off, if they are responsible. I will defend the idea that hardship should often overrule responsibility, and sometimes even compensation, in section 4.4. But for now I simply note that if this is correct, time-relative prioritarians face a tension. Prioritarians could exclude this possibility by claiming that very different claims apply above and below the threshold that divides being merely worse off from being badly off. But this, as I have defined the positions, is a form of time-relative sufficientarianism.

[34] There might be additional reasons that would recommend compensation. If the moment of agony was caused culpably by another agent, that agent might owe compensation even if there was no further effect on S's life. So I do not suggest that unjust culpable actions can be forgotten if we cannot help at the time, and there is no further negative effect on the victim's life.

4.3 Sufficiency

While prioritarianism has the strength of people's claims track their absolute state in a continuous fashion, sufficientarianism says that people have distinctly strong claims when they do not have enough. If S does not have enough at a particular time, straightforward time-relative sufficientarianism tells us that she has a discontinuously stronger claim even if she made the choice freely. Sufficientarians can also apply prioritarian reasoning above the threshold (or between thresholds, if they are multiple). But sufficientarianism need not say that claims become stronger whenever someone becomes at all worse off. What makes sufficientarianism distinctive is its application of different claims above and below the threshold; this must at least include the strength of claims, but may also include other factors like the role of responsibility. If S makes a culpable decision that lowers her current levels of ∑, but does not bring her below the threshold – e.g. incurring a moderate injury whilst engaging in a risky sport, or losing some money in a risky investment – responsibility may either nullify her claim, or reduce its intensity in comparison with others' claims depending on the size and type of harm. But this will not happen if that decision brings S below sufficiency – e.g. incurring a life-threatening injury, or losing her home.

So time-relative prioritarianism fails, and sufficientarianism succeeds, in accommodating both the view that people can make lifetime distributive decisions without affecting their claims at particular times, and that there should be some level below which people have special claims even if they are responsible for their decision. This assumes, of course, that we really should have such a distinctive concern with hardship. Section 4.3.1 defends this claim, while Section 4.3.2 considers some further concerns about time-relative sufficientarianism.

4.3.1 Justifying a concern with hardship

I have said that time-relative sufficientarianism is more plausible than time-relative prioritarianism because it allows responsibility and compensation to play a role in the strength of people's claims, but also for hardship to set a point at which they do not, or at least at which their role is weakened. But this order of priority needs justification; one might insist instead that although hardship is important, responsibility and compensation trump it. This would remove sufficientarianism's theoretical advantage over prioritarianism.

This may seem to have only limited application to the debate on ageing enhancement. After all, one might think that since we do not choose to age, this is not a hardship with which compensation or responsibility clash. But responsibility may be invoked because the degree to which ageing increases our likelihood of death at a particular time, and its physical effects on us, are mediated by lifestyle choices. Compensation comes in when we think about the idea of prudent savings, as stressed by Daniels; one might insist that rather than providing ageing enhancement through the state, people should be left to save up for it, and if they cannot afford

it then this is not our collective problem. And it is anyway an important theoretical step in the defence of time-relative sufficientarianism.

If people know that they will be bailed out whatever their culpability, risky behaviour becomes more likely, and as a society we face unconstrained costs.[35] If people make imprudent decisions in their youth that significantly increase their needs or reduce their means in old age, perhaps we are justified in refusing to honour our normal commitments, either on the grounds that people's irresponsible behaviour can void their right on the basis of desert, or to avoid the moral hazard of people knowing that there will be minimal consequences to self-destructive behaviour. This section aims to defend the claim that we ought to intervene in such decisions.

There are two ways to do this. We can allow individuals to make free choices, and then alter the subsequent distribution to meet any hardship they incur; or we can prevent individuals from making some decisions in the first place. Each has a reason to recommend it that corresponds to an unattractive feature of the other. Preventing bad decisions is preferable because rescuing people can be costly to the rest of us; better to prevent the need for rescue in the first place. But as Bou-Habib points out, blocking choices for an agent's own good is paternalistic; intervening after the fact allows us to respect the autonomous decisions people make to a greater degree, especially since some gambles will turn out well or not go as badly as we might have assumed.

This dilemma seems to apply just as much to choices that make people badly off as to those that merely make them worse off. Bou-Habib insists that constraining choices even to prevent very bad situations is unjustifiably paternalistic, and instead justifies prior intervention on the basis of the "intrinsic value" of autonomy (op cit: 300). I will not engage with this positive account here. Rather, I will offer reasons to think that paternalism is more attractive than Bou-Habib supposes, especially when dealing with absolute insufficiency. This provides a sufficient range of cases in which hardship trumps responsibility, enough to motivate the particular role of thresholds that gives sufficientarianism an advantage over prioritarianism. Moreover, the cases I will discuss are predominantly those where hardship occurs in old age due to decisions made earlier in life, and so have distinctive relevance for the provision of life-extending healthcare.

I will consider two kinds of case. First, there are individuals with explicitly youth-oriented views of the good. They assume that it is far better to enjoy life while one is young than to save prudently for old age, and so would accept perhaps even radical sacrifices in their future to live

[35] Cohen (1989) suggests that this is only a problem for welfarists. If people have the same opportunities then any further differences in welfare are down to them. But this solution really just rules in favour of responsibility over hardship; Cohen (922) acknowledges that if one fails to develop an appropriate power when one has the opportunity, one's future opportunities are affected. As such, the move to opportunity has added nothing, for a failure to develop one's powers early on also results in a dearth of opportunity later, for which the agent apparently has no claim because of her past responsibility, no matter how distant.

extremely well now. Second, there are those who make future-affecting decisions that are imprudent by their own lights. They respectively represent a clash of hardship with compensation and responsibility.

The latter figure does not now endorse a vision of the good that accepts hardship in old age for the sake of his youth; he wants it all. Intervening in this person's decisions before they are realised would be 'weakly' paternalistic, i.e. would pursue their good by their own lights, but in a more coherent way than they are able. We can invoke a combination of the person's self-perceived good and our desire not to face an overly costly intervention later on to justify some weakly paternalistic interventions in current decisions.

There are obvious restrictions on such a policy. Since people are resistant to their choices being constrained, coercion or manipulation may be necessary to make people conform, and in many cases the considerable cost of these approaches will outweigh the benefit of paternalism. There is also distinct personal value for most people in directing their own lives, even if the directions they take do not seem best to the rest of us; self-direction is a part of their ideal life. Moreover, in many cases it will not be clear that it is the individual who has gone wrong epistemically or rationally, rather than those who would interfere for their own good. And finally, a state that interferes overly with its citizens' choices for their own good expresses – perhaps unintentionally – a lack of respect for their ability to run their own lives competently. But if the cost by someone's own lights is great enough, there is no justification for an absolute prohibition on such weak paternalism.

If we collectively fail to intervene when we ought to, and a gamble goes wrong, we share at least some of the culpability for the outcome. This justifies intervention after an imprudent decision has gone wrong. That is not to say that the individual is not also responsible. Apportioning culpability precisely is impracticable; but the threshold of intolerable hardship is a minimum to which the rest of us should collectively commit in rectification. Moreover, in some cases of poor decision-making the individual risks losing the capacity to redeem their mistake, due to injury or significant loss of resources. The justification for leaving an individual to pick up the pieces of her own mistakes in most cases is that it is unfair on the rest of us to foot the bill for something we had no hand in. But this justification is weakened when we consider these extreme circumstances, for such a principle would allow an individual mistake to dictate the poor standards of the rest of someone's life.

It is true that in this situation we are being asked to foot the bill for a choice we did not make, and would not have made. But here the rest of us approach a problem that we are able to solve collectively and that an individual may be simply unable to solve by himself. Even if agent-responsibility is an important principle of justice, we ought to assign remedial responsibility on the basis of ability when the person who is agent-responsible for their poor situation is unable to exercise that responsibility. As such, I suggest that interventions both before and after

imprudent decisions is justified in some cases, and that hardship (whether or not it is autonomy-affecting) sets a reasonable minimal threshold for deciding among such cases.

The former kinds of case are more problematic; prospective intervention here would involve preventing someone's free choice on the grounds of their own good, but according to values that they do not (currently) share. People with youth-oriented views of the good might prefer that society funds their youthful enjoyment at no cost to their old age, but if that is not an option they will accept hardship when old for greater benefit when young. For such people, we must either endorse 'strong' paternalism – i.e. intervening *against* their current judgement of their good – or allow them to suffer a hardship later on that we would normally consider ourselves to have a duty to prevent.

Opponents of strong paternalism may cite the view that we should allow people to reap the benefits and suffer the losses of decisions they have taken when those consequences were, or reasonably should have been, foreseen. This justifies allowing people to suffer the results of failed gambles. If someone saw a risk as worthwhile when they gambled, they must be prepared to live with the result if the gamble fails. I have already suggested that this idea does not support anti-paternalist arguments as strongly as one might suppose. But the case of gambles which affect an agent long after she has made the decision – such as those which affect old age but which are made earlier – provides additional considerations in favour of strong paternalism. While we feel the repercussions of many failed gambles immediately, the gambles considered here are long term and people may fail to identify with their decision or the values underlying it when the burden is felt.

Failure to identify with a decision does not merely involve regretting it. If I willingly take on a gamble because I expect it to pay off, I may in hindsight regret my decision if it does not. But this involves transplanting my current knowledge into my past decision, seeing it as mistaken in retrospect. Failure to identify involves not just seeing a decision as a miscalculation, but as based on values that are no longer mine. And not identifying with my past decision does not mean I do not see myself as the same agent who made the decision. I can fully acknowledge that it was I that made the decision, in the grip of a youth-oriented conception of the good, which is now costing me dearly in my old age. I may even have made that decision in full knowledge that I would lose that youth-oriented conception. But I now see the decision itself as based on values that are mistaken, and no longer my own. In such cases, the usual link between a person's decision and the results of that decision that supports allowing people to suffer the results of their choices is at least weakened, if not entirely severed.

A further objection to paternalism relies on agents' privileged epistemic access (e.g. Mill, op cit: 148; Tännsjö, 1999: 16)) to their own preferences, ambitions and values; it seems arrogant for us to assume that we know what is better for a competent agent, given her own self-knowledge. However, this epistemic privilege is again weaker for decisions whose effects resonate far in the

future. Some people who have a youth-oriented conception of the good when they are young will not hold that view, at least not as radically, when they get older. The epistemic privilege that opposes paternalism is introspective; agents are taken to be more capable (although by no means infallible) of finding out what it is they really want or value. But such introspection is a far less reliable way to find out about one's future values. One can only introspect on one's present values, and make guesses from there.

Anti-paternalists may note that even if temporal distance reduces the degree of epistemic privilege, it does not remove it altogether. Individuals' preferences and values at different times bear relation to each other; we do not change at random. Nor does the passage of time increase the ability of others to know what is good for you. This is true, but misses the point. Once we remove the privilege of direct introspection, the agent is effectively working on the same empirical basis as the rest of us with regard to her distant future. So others might be able to make better estimates than the agent herself of what her view of the good may be, e.g. noting that many people who start out with youth-centred visions of the good in their youth go on to change their minds when they are older. This is not to claim strong epistemic authority about others' minds; it simply suggests that there is more scope for including others' views, even on quite a subjectivist picture of value and welfare, when the agent is concerned with her own distant future.

Another consideration against paternalism is the idea that a person's "own mode of laying out his existence is best, not because it is best in itself but because it is his own mode" (Mill, op cit: 141). This seems plausible for the most part. But confronted with someone who is entirely disconnected from a decision that she took, I do not think we can really say that we are promoting her ability to choose her own mode of existence by insisting that she suffers the consequences fully. We may say something like this because we continue to respect that 'mode' that she favoured all those years ago. But if she no longer favours such a view, and indeed repudiates it, it seems odd to suppose that our respect for an individual's seeking her own mode of existence should prioritise a particular viewpoint simply because it came earlier in time. Rather, our respect for her own mode of existence should at least consider her current views.

So the presumption that we must be bound by our autonomous decisions should not hold as strongly when we cease to identify with the values behind those decisions when the effects of the decisions are felt. The justification for such a practice presupposes that the values underlying a decision carry over to the time when the effects are felt; in such cases, I bind myself according to values that I continue to endorse. But if it is unlikely that I will endorse those values when I feel the effects, I am not being fair in so binding myself.

The argument thus far does not justify strong paternalism; it might instead support *post hoc* intervention when negative effects are actually realised. After all, at least some of the considerations against paternalism – such as its being potentially expressive of a certain kind of

social disrespect for the agent – still stand. I have said we will have reason in the future to rescue someone from the negative outcomes of youthful decisions from which they are now disconnected. But we are still sometimes justified in pursuing the option that is less costly to ourselves, depending on how that affects the agent herself. Foreseeing that we will find ourselves with strong reasons to help an individual if they should fail to identify with their risky decision in the future, we are justified in taking the overall less costly step of pre-emptive intervention.

We thus have justification to paternalistically block certain decisions that will lead to significant hardship with which an individual is likely to fail to identify, and which she will be unable to set aside, even if they now clearly endorse this trade-off. This need not mean that such individuals should be forced to set aside anything like an equal share for their old age; but elderly people should not be completely trapped by their youthful decisions, even if the consequences were fully anticipated and endorsed at the time. Again, the time-relative sufficientarian conception of tolerability offers a plausible minimum to commit to.

This principle is also subject to restrictions; we are not entitled to step in and prevent all decisions that someone might merely regret when they are older, for there are costs to paternalistic intervention. The state is not entitled to force people to choose the best life, or even to ensure that their worst option that they risk be as good as possible; it is only entitled to prevent the very worst possibilities from being realised.

This justification for strong paternalism is that in cases where the effect is felt far into the future, there is a risk of an important disconnection between the individual's values when they act and when they suffer the costs. This is far more likely to occur when costs are at a temporal distance to a decision, but it is possible that it will happen in other cases. It does not apply in cases where the individual both foresees the cost, and is likely to identify with the decision once the cost is incurred. In such cases, it may be justified to leave someone to suffer hardship. Still, the cases I have outlined are enough to support my claim that sufficientarianism is preferable to prioritarianism because the introduction of a threshold allows us to favour responsibility and compensation in some cases, and hardship in others. I have framed the discussion as though this is a very neat division, where all cases of people dropping below sufficiency trump responsibility and compensation. But the broader argument still works even if the threshold marks only some such cases. The overall account will of course be more complex, but that is not in itself a flaw in sufficientarianism. This argument also suggests that there is no simple anti-paternalist case for making access to life-extending healthcare in old age dependent on having saved up sufficient funds on a private basis.

The worry that began this section is that we might not be able to justify the stark difference I have assumed between allowing people to become worse off through their own culpable action, or in ways that compensate them in their view, and allowing them to become absolutely badly

off. Levels of sufficiency mark the point at which a three-way trade-off changes balance. Whenever someone is in a position that raises a potential claim of justice, through their own fault, we have three options; we either leave them to it, save them after the fact, or prevent them from getting into that position in the first place. When the first option is less costly to them than either a) the second option is to us or b) the third option is to them, we should let responsibility reign. When people are badly off, rather than merely worse off, the first option is often far more costly to them than intervention is to us; and paternalistic prevention may sometimes be the least costly option to everyone. However, we need not assume that we are entitled to pre-emptively step in whenever a choice will be bad for someone in their distant future. If the cost to the individual is particularly bad, but the costs of paternalism are also high (e.g. paternalism would only be effective in the form of costly and intrusive monitoring), then the third option, stepping in *post facto*, becomes the least costly option overall. This means that hardship often takes priority over responsibility. If, as I have argued, sufficientarians are best equipped to explain this priority, this idea provides support for sufficientarianism.

The case of compensation is more complex. I have suggested that compensation may sometimes trump what we consider to be hardship. Sufficiency provides a useful threshold for deciding between various cases. Again, this vindicates sufficientarianism, even if things are not as simple as with responsibility.

4.3.2 Is sufficiency enough?

This section considers some objections to time-relative sufficientarianism, and explains why they are either not compelling objections, or not necessarily applicable to sufficientarianism.

The first objection is that sufficientarians must sometimes prefer smaller gains for the better off to larger gains for the worse off, entirely against the egalitarian spirit (e.g. Roemer, 2004: 279; Casal, op cit: 315-316). If S is very near the sufficientarian threshold, and sufficientarians aim to *maximise* the number of people above the threshold, they prefer to help S over it with a small gain rather than offer a greater gain to someone who is too far below the threshold to breach it. For resourcists, this may not be implausible, depending on the threshold; giving all of our medicine to the very worst off patient, who is likely to die anyway, is bad triage. Such cases do not help opportunists or welfarists, since it is clear that the dying patient gains very little in those terms. But more importantly, sufficientarians need not be maximisers, and certainly need not have breaching the threshold as their only concern. The minimum they must insist is that the strength, and perhaps nature, of claims is discontinuous above and below thresholds. So this objection does not apply to all forms of sufficientarianism.

The second worry is that sufficientarians allow unjust inequalities above the threshold, since they only care about people having enough. Again, this concern applies only to a specific type of sufficientarianism, i.e. one that holds Casal's negative thesis with regard to all thresholds. If sufficientarians are only committed to the importance of a threshold in defining a difference in

claims, they need not commit to the irrelevance of claims above the threshold. Moreover, time-relative sufficientarians can often prefer benefitting people who are *currently* above the threshold on grounds of stability; those near the threshold are more likely to fall below it at some future stage. For instance, we might invest in preventive healthcare measures even in people who are currently in reasonable health because they are vulnerable to ill health. Since time-relative sufficientarianism is concerned with the future as well as the present, this is a legitimate reason to prefer benefitting someone above the threshold.

Another way to reduce the force of this complaint is to note the importance of positional goods (see Frankfurt, op cit: 23). Although sufficientarianism is fundamentally concerned with absolute rather than relative positions, absolute positions are fundamentally affected by what others have. Goods that have a strong social component are most plausible for setting a positional threshold. This is both because what counts as 'enough' for some goods may depend on what others have, and because not having a certain level of some goods compared to others can have significant effects on self-esteem, and hence both directly on welfare and, as I will discuss later in this section, whether one finds one's position tolerable and/or worthwhile. Axelsen and Nielsen (Forthcoming) claim that certain political freedoms fall under both these categories (see also Brighouse and Swift, 2006), and we might think that certain forms of respect or political status might be so strongly positional as to require formal equality. At least for these goods, inequality places those at the bottom beneath the sufficiency threshold, because the value of an absolute level of these goods varies according to one's relative position with regard to that good. So even sufficientarians who insist that there are no fundamental reasons to care about distributions above the threshold may see derivative reasons for so caring. But this does not mean that all goods ought to be governed by equality; as outlined in Section 4.1, for instance, some inequalities in welfare at particular times have little to no impact on self-esteem, and the value of these goods is not positional. Health is a key example. The value of our health is not predominantly affected by how healthy others are, so it is not a positional good. And the value of health is not relative. We do not typically care about our health compared with the health of others.

Sufficientarians who are indifferent to some inequalities can offer a further response. If there are multiple thresholds, one might oppose some inequalities above a lower threshold, but not above an upper threshold. As I suggested in Chapter 3, Frankfurt – often singled out for holding Casal's negative thesis, and so being indifferent to inequalities above sufficiency – seems to hold this view; he is concerned when discussing an upper threshold of 'contentment' with the idea that inequalities may no longer matter; but this idea does not appear when he addresses clearly lower boundaries such as subsistence (see also Huseby, 2009).

A third worry is that sufficientarians are wasteful, preferring small benefits for those below the threshold to benefits of any size, for any number of people, above the threshold. This assumes

that sufficientarians have a lexical preference for those below the threshold, so that a small gain for one person below the threshold always trumps large gains for innumerable people above the threshold. But again, sufficientarians need not defend this position. All sufficientarians need say is that claims from people below the threshold are discontinuously stronger than those from people above. Sufficientarians must sometimes prefer smaller gains to larger, but neither benefit size[36] nor numbers need be irrelevant.

A fourth concern is more pressing: that there is no principled way of setting a threshold. It is not enough simply to stipulate a threshold; we need to explain why dropping below that point makes the important difference to the strength of one's claims. Shields (2005) suggests that we can avoid arbitrariness by appealing to the idea of satiability. Some claims are satiable, in that once S has secured a certain amount of $\sum$ on the basis of a satiable claim, she cannot appeal on the basis of *that claim* for any more. If S needs treatment for an infection, there is a level of resources that will complete that task. She may have further claims to a different benefit, but she must appeal to a "different profile of reasons" (113); she has no further claim on that basis. Sufficientarians thus only need to identify satiable claims on the basis of which we can deem that people have a sufficient level of $\sum$ for the strength of their claims to change significantly.

This account receives some support from the fact that many everyday and academic discussions of distributive justice centre on just such satiable claims. People have claims against material deprivation, to the opportunity to make some fundamental choices in life, and against stigmatising differences in status. They have claims to being spared or relieved from severe physical pain and mental distress. These claims are often satiable at times; once we have given someone a certain amount of opportunity or access to influence over the decisions that affect her life, it is possible that she no longer suffers stigmatising differences in power in the context of those decisions (although satisfying this claim in one respect need not satisfy it fully). Once we have given someone pain relief, he no longer suffers pain at a particular time. Giving any more might improve people's situations in other ways, but it would not make them *less* stigmatised or deprived, or in less pain if their pain has been relieved; if further intervention would benefit the person in question at all, it would be by improving things in other ways.

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[36] Some sufficientarians claim that no amount of 'trivial' benefits for the well off can ever trump significant benefits for the badly off: Crisp (754) says we should never prefer giving chocolates to the well-off over relieving suffering for the badly off, no matter how large or small the respective groups (see also Voorhoeve, 2014). Widerquist (2010) criticises such suggestions because, "trivial costs and benefits necessarily add up to significant costs and benefits". For instance lowering the speed limit by 1mph is trivial compared with the number of lives saved. But if we follow this logic through, we will ban driving altogether, which is a significant cost. However, sufficientarians may claim that we should never prefer trivial benefits *until* they amount to significant benefits. Widerquist assumes falsely that if a 1mph drop from the current speed limit is trivial, it must be trivial in all circumstances. But Crisp does not claim that the benefits must be *equally* significant, only that they both be significant for weighting to be permissible.

However, an appeal to satiability is not enough to ground a properly sufficientarian threshold. After all, many kinds of claims are satiable, including buying one's own island, or having sufficient political influence to have a private police detail guarding one's house. But it would be extremely counterintuitive to set even a high sufficiency threshold at these points. I have suggested several examples where a small difference in ∑ seems to make a large difference to people's situations, justifying the discontinuous strength of their claims. These claims are satiable, but they are also the kinds of things that we tend to think people *really need*, unlike access to a private island. So sufficientarians need to constrain their account to reflect this difference.

Moreover, it must be that the sufficientarian threshold which marks a point at which people's claims become discontinuously strong does not *also* mark a point where there is a discontinuous drop in ∑; if they did, there would be a non-egalitarian – e.g. utilitarian – justification for the additional strength of those claims, on the grounds that benefitting the person below the threshold would simply be better overall. The final pound I receive in saving up for my island, despite being a small increase in my resources, makes a big difference to my opportunities, and indeed to my welfare. Critics of sufficientarianism might argue from this fact that we should be welfarists, and that a sufficientarian stance for resourcism and opportunism only looks plausible because small additions of resources or opportunity can have a large impact on welfare. So now we should worry that the appeal to satiability does not point out a plausibly *sufficientarian* threshold, and that its appeal only survives because small differences in one currency make a large difference in another, more fundamental currency.

My response to these two related concerns follows Frankfurt in grounding the sufficientarian threshold in particular attitudes we take – or would take, were attitudes elicited – towards our absolute positions, including towards our level of welfare. Frankfurt applies this idea to resources, appealing to the idea of contentment. Contentment means not that one's position cannot be improved, but that improvement is a possibility about which one is not particularly concerned. On Frankfurt's view, people have discontinuously stronger claims when they are not content than when they are content.

One worry about this is that it will be unclear when people have breached the threshold, so that sufficientarianism fails to define a threshold in "a principled manner that provides determinate and plausible guidance for distributive decision makers" (Casal, op cit: 313). But this concern is misplaced. Distributive principles tell us what determines our moral and political responsibilities. Of course, we also need to generate action guidance; but there is no reason to suppose that the principle that determines our fundamental moral commitments must be capable of being used, *verbatim*, to guide action. If we face problems in determining when people have passed a subjective threshold, we may have to use estimates, based on assumptions about typical behaviours, reactions and needs. But this still uses the sufficientarian principle as

fundamentally determining our action; it simply does so indirectly. In this regard it is no different to principles that tell us to treat people differently if they act carelessly or intentionally, or a rule that says we should give pain relief to patients only if they are actually in pain.

Contentment may be a plausible upper threshold. But it cannot work as a lower threshold; in that role, it fails to capture what is distinctive about sufficientarianism, which is a concern with the absolutely badly off. I also suggested that a considerable strength of sufficientarianism is in marking a point at which individuals' responsibility for being worse off should no longer automatically negate or weaken their claims. Having contentment mark our lower threshold would mean that responsibility stops playing a role as soon as someone feels discontent. That would imply that we are only responsible for decisions that turn out very well, which is no responsibility at all.

Huseby (op cit) suggests subsistence as a lower threshold. This is problematic if subsistence is concerned only with bare survival, since this implies that our fundamental moral commitments bear no reference to the psychological states of those who have claims on us. One can physically survive, and yet be in a very bad way psychologically. It seems unlikely that we have discontinuously strong claims merely to be kept alive. Callahan, whose position I discussed in Chapter 1, gets at least this much right; it should not be an aim of social policy to keep us biologically functioning after the point when we have ceased to see any value in living. And it is hard to make much sense of what one would have a claim to; if someone personally saw no value in living, why would they make that claim at all?[37] Moreover, an appeal to subsistence ignores the claims of the dying; those whose lives we cannot save, and who will die soon, still have claims of justice to pain-relief, emotional support, and so on. An appeal to subsistence is doubly inadequate.

We should not necessarily assume that we will identify our threshold by an appeal to just one feature of our existence. I will focus on two such features, both subjective attitudes like contentment; these are tolerability, and the sense that one's existence is worthwhile. It is possible that there are others, but these seem to me to be central instances. We have much stronger reasons to intervene when people find their situation intolerable than when people are in a tolerable position, even if the latter are still not content. Suggesting tolerability as a lower boundary need not imply that there is nothing important about subsistence. For one thing, there are degrees of intolerability, and those who cannot even subsist are typically at the lower end of this scale; so if we allow some degree of differentiation below our lower threshold, we can

[37] Perhaps there are cases where others might make a claim of subsistence on a person's behalf, despite that person having no subjective attitudes towards their position e.g. in the case of brain death. Rejecting subsistence as a threshold implies that in cases where a person has no chance of moving beyond mere survival, there is no claim on the resources needed to keep them surviving non-consciously. I accept this implication.

recognise stronger (but not discontinuously stronger) claims on the basis of subsistence. But this does not undermine an insistence on tolerability altogether; for this threshold marks a sense that merely keeping someone alive is *not enough*. We fail seriously if we save someone's life but knowingly and avoidably allow them to exist in an intolerable state.

Frankfurt (38) explicitly rejects an appeal to tolerability. But he seems at this stage of discussion to be concerned with an idea of sufficiency at which people's claims *cease* (the negative thesis), rather than merely get weaker, and it does seem clear as he says that our obligations to help others do not cease when they are "living on the brink". Nonetheless, even if we recognise an upper threshold such as Frankfurt's idea of contentment, it is too simplistic to group together all those who are not content with their lives. This is why I have suggested that the most charitable characterisation of Frankfurt's position is as suggesting multiple thresholds.

Toleration is, like contentment, an attitude taken towards one's situation. It is neither merely a psychological state that contributes to welfare, like happiness, nor an external description of a particular level of welfare. It is true that finding a situation intolerable may cause additional distress, and hence lead to further declines in welfare. But finding something intolerable is not the distress itself. Frankfurt discusses contentment in similar terms, saying that to be content need not imply that one would not be happier with more, but that one feels no sense of urgency to acquire more. The attitude of tolerability may contain what Frankfurt says is absent in contentment: a sense of activity and urgency in trying to better one's situation, but without the sense of despair that what one has simply is not enough. Lacking the attitude of toleration may exhibit itself equally actively, but it may also be a passive kind of despair; we need not think that just because someone has resigned themselves to their situation, they find it tolerable. Frankfurt applies this idea of attitudes solely to resources, but it is also potentially applicable to one's opportunities or as a second-order attitude to one's emotional state or mood.

Claims deriving from the idea of tolerability can come in two strands. People have a positive claim to relief from intolerable states. If someone is in an intolerable position, our most obvious obligation is to end that suffering. However, we should also recognise a positive claim to be enabled to have (or at least given the means for) a tolerable existence. Superficially, these claims may seem to be equivalent. But their difference is particularly pertinent in discussing life-extending healthcare such as ageing enhancement, since it would strictly speaking satisfy the negative requirement to allow somebody to die. If we have a positive obligation to extend people's lives, we need a positive requirement to supplement the negative principle.

I said that a plausible lower threshold may respond to multiple features. One worry about appealing to tolerability alone is that people may adapt to very bad situations by coming to find them tolerable, simply because that is what it takes to get by. Of course, sufficientarians who deny Casal's negative thesis can still insist that such people have very strong claims; but we might think that a sufficientarian theory should insist that they have discontinuously strong

claims, despite now finding their situation tolerable. The second attitude I consider is that of finding one's life worthwhile. Even if one comes to find tolerable a quite terrible situation, one may not conceive of it in a more positive sense as a worthwhile way to live. To find things worthwhile, while not an attitude of disinterest to improvements like contentment, is a more positive attitude than toleration since it involves a sense that one's situation is satisfactory or worth being in.

Introducing two features for a low threshold clearly complicates things. I will now briefly describe the relationship between these two ideas.[38] The view of one's existence as worthwhile applies to moments, but is likely to be informed by knowledge about what has recently occurred, and what is coming next. It thus also seems possible to find things worthwhile, but not tolerable. This occurs when one is undergoing short-lived suffering – say, a short period of agony – but in the knowledge that it will pass. People have discontinuously strong claims when in such a state, even though they find their existence worthwhile, because their pain is intolerable. People also have discontinuously strong claims when they find their state tolerable, but not worthwhile. There is more than one way not to have enough.

This goes at least some way to solving the problems raised at the beginning of this section. An appeal to attitudes, which can be directed to one's level of welfare among other things, undercuts the argument that sufficientarianism only looks appealing for resourcists or opportunists because they implicitly appeal to a non-sufficientarian welfarism. And an appeal to these attitudes can differentiate between different kinds of satiable claims. Such an account has apparent implications for ageing enhancement and the Egalitarian Objection; death is the end of worthwhile existence, while physical ageing can bring about intolerable states, at least in terms of welfare and opportunity.[39] If there are distinct egalitarian claims against those states at

[38] These twin concerns may also face various additional constraints when it comes to state action. Frankfurt notes that a person might be content in his sense, and yet feel significant lack in her life because, for instance, she has not found love. There is certainly something to the idea that not all sources of intolerability or a sense that one's life is not worthwhile are within the remit of the state or other institutions. S may feel that his life is not worthwhile because he has not yet started a family. Yet we have no obligation to find him a romantic partner. On the other hand, if his inability to find a romantic partner is due to his having to work all hours to afford somewhere to live, leaving him with no free time, we should have something to say about that. I am not sure quite what marks the distinction between sources of intolerability or lack of worth that command and do not command the attention of formal justice. But I doubt that Frankfurt is right to suggest it is merely a lack of money, since social and institutional barriers can have an equally fundamental effect on one's situation.

[39] Things are more complicated for resourcists. While it makes sense to talk about people having equal resources, and about having more or less resources in an absolute sense (as prioritarians would) without any further reference, it seems to me to make little sense to talk of having sufficient resources without some object of sufficiency; we have to answer the question 'sufficient for what?'. And we will inevitably

particular times, then it seems as though elderly patients have claims, on egalitarian grounds, to ageing enhancement. Of course, this is hardly the end of the matter, since there may be alternative considerations from our lifetime principle, or from the relation of the two principles, that undercut that apparent commitment.

4.4 Summary

I have argued that our time-relative concerns should be sufficientarian. Time-relative egalitarianism is implausibly restrictive, and sufficientarianism better captures the relationship between our competing concerns with responsibility, compensation and hardship than prioritarianism. This position requires some degree of paternalism, but I argued that this is defensible once properly spelled out, especially because of distinctive features of the kinds of cases in which I am interested.

A concern with time-relative sufficiency gives us some reason to doubt the idea that we should automatically prefer interventions for young patients because elderly people have had more total lifetime ∑. Such a view seems reflected in Kappel and Sandøe's (1992: 314) claim that extending the lives of an elderly rather than a young person is equivalent to giving money to the wealthy. Understanding the distinction between lifetime and time-relative egalitarian claims helps show a significant flaw in that analogy. It would certainly be worrying *ceteris paribus* if we were giving cash handouts to the wealthy and not the poor. But this impropriety can be explained by considering the respective individuals' *current* holdings. A better analogy would be with giving money to someone was *previously* rich, and so has a greater total of lifetime holdings, but is no longer so.[40] I have not yet discussed the relationship between the lifetime and time-relative principles (and will do so in Chapter 6), so for all I have said so far this *could* be unjust. But it is both less obviously unjust than preferring the currently wealthy, and more obviously analogous to the state of elderly people who need medical interventions.

Before I can consider the relationship between the two principles, however, I need to outline what the lifetime principle ought to be. In the following chapter I do so, arguing that time-relative prioritarianism is the only feasible option.

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end up referencing either some component of welfare, or some opportunity, in this answer. In such a case, we would not have some distribution of resources as our fundamental aim (though of course it may be one of our primary distribuanda, since it is rather difficult to redistribute welfare). So, time-relative sufficientarians should probably not advocate resourcism. Still, I will continue to discuss resourcism in the following section for two reasons. First, there may be some way for time-relative sufficientarians to care fundamentally about resources that I have not noticed. More importantly, our lifetime and time-relative principles may have different currencies, especially if they apply different distributive principles.

[40] Harris (1994: 76-77), whose arguments the original article critiques, also suggests that the analogy is inappropriate because life is not a good that is transferable between people. Kappel and Sandøe (1994) respond.

Chapter 5: The Egalitarian Objection – The lifetime principle

Chapter 4 defended time-relative sufficientarianism. Chapter 5 addresses the lifetime principle that complements it. I defend a form of lifetime prioritarianism, since the advantages sufficientarianism holds at the time-relative level are not present across lifetimes, and the strategy for identifying a threshold does not transfer to the lifetime setting. This chapter also addresses further versions of the Egalitarian Objection, based on alternative lifetime principles. In arguing for prioritarianism, I offer reasons to reject these versions of the objection.

As in Chapter 4, I begin by considering each version of the lifetime principle in turn, beginning with equality in Section 5.1. Section 5.2 considers lifetime sufficientarianism and suggests some problems that its time-relative variant avoids. Section 5.2.1 outlines the lifetime sufficientarian 'fair innings' argument, which must rely on one of two views that potentially ground versions of the Egalitarian Objection: a statistical view of a fair share of life (5.2.2), or a normative view of a 'complete life' (5.2.3), and argues that neither of these views is convincing. Section 5.2.4 considers a new worry for time-relative sufficientarianism based on this discussion. Section 5.3 defends lifetime prioritarianism, including explaining why it does not face the same problems as its time-relative version (5.3.1).

5.1 Equality

Lifetime equalitarianism aims for people to have equal $\sum$ over their lifetimes. This would give some support to the Egalitarian Objection; extending the lives of elderly people would in many cases increase lifetime inequality. Lifetime equalitarianism says we should avoid this even if we could not otherwise benefit young people, so it would oppose many cases of ageing enhancement even if the foregone benefit to elderly patients could not be redistributed. This section outlines a relevant worry about this form of equalitarianism – the 'levelling down' objection – considers an updated equalitarianism that avoids levelling down, and offers a worry for this new position.

As with the Rawlsian views considered in Chapter 3, the goal of equalising lifetime welfare or opportunity faces a challenge from individuals who will unavoidably have very meagre lives, either because of a short lifespan, or because of an irremediable condition that gives them very poor, non-compensable quality of life. The only way to obtain equality when we cannot sufficiently improve the position of the worst off is to 'level down' everyone else (Parfit, 1997: 211) by making them worse off and denying them additional benefits. This is not true for resourcist equalitarians who take resources in their everyday sense of goods external to agents, since they will simply give the worst off the same level of resources as everyone else. But such resourcists struggle to accommodate the fact of disability, since they give the same amount of external resources to someone who struggles to 'convert' resources into welfare and other goods, which seems contrary to egalitarian aspirations. Resourcist positions that respond to this

issue by categorising internal capacities as resources – such that a person with a disability has an intrinsic resource deficit that we should compensate (e.g. Dworkin, 1981: 300) – face the levelling down problem again.

Some equalitarians embrace levelling down. Temkin (op cit) argues that cases where we strongly object to levelling down – e.g. Parfit's example of responding to the fact that some are blind by blinding everyone else – are those where the value of equality is outweighed by other values. And there may be more compelling examples that offer a fairer assessment of equalitarianism: Casal (op cit: 307) suggests that if a hospital provided every patient with "enough medicine, food, comfort and so forth", it would still be objectionable to house a few patients on a luxury ward that is inaccessible to the rest. If we think it would be better to not spend the money on anyone than to offer selective luxury, we may be committed to some kind of levelling down.[41]

The degree of levelling down needed to achieve genuine lifetime equality is immense, given the unavoidably poor situations of some individuals. Achieving equality for those with the very worst lives would require everyone else to subject ourselves to severe misery. Of course, pluralistic equalitarians can oppose this move for non-egalitarian reasons; and if the argument in Chapter 4 is correct, time-relative sufficientarianism could place limits on how low we are allowed to bring people in the name of equality. But not only is it on balance wrong to torture people so that they will suffer as others have; we have absolutely no reason to do it, and nor do the worst off have any claim that we do. If there is *no* weight to levelling down in such cases, an alternative is that those cases where levelling down looks more appealing, such as Casal's hospital case, have other reasons on their side than the value of strict equality. For instance, patients who are not selected for VIP treatment might feel as though this is a comment on their relative worth; public institutions such as hospitals have procedural reasons to treat people as equals in some regards, even when there is no fundamental claim to distributive equality.

A particular version of the levelling down problem concerns lifespan increases. Lifetime equalitarianism insists that members of one generation should have the same total lifetime $\sum$ as the previous generation, even if they will have longer lives. As lifespans increase, equalitarianism requires that less is made available for each particular year, in the name of lifetime equality; someone who lives eighty years with a positive welfare level of w has greater lifetime welfare than someone who lives fifty years at w, so to equalise lifetime chances, the former person's welfare level would have to be proportionately lower than w to compensate.

One might try to mitigate this issue by restricting comparisons to overlapping generations. While it seems implausible that we should aim for lifetime equality with our distant ancestors, perhaps it is less troubling to say that we should aim for lifetime equality with co-existent generations. However, this route does not solve the problem because generations overlap.

[41] Casal does not offer this example in support of levelling down, but the extension seems natural.

Assume that we are constrained to equality of ∑ with the current generation of elderly people. In turn, they were obligated to have equally good lives as their grandparents' generation, and so on. Our starting point is linked inextricably to much earlier generations.

However, some versions of equalitarianism avoid levelling down. Persson's 'relational prioritarianism' (2008), does not say that equality is independently valuable (such that it could make an otherwise bad distribution good), but that benefits are more valuable the worse off recipients are relative to others. This compares with what Persson calls 'absolute' prioritarianism (i.e. what I have simply called prioritarianism), the view that benefits are worth more the worse off recipients are in non-comparative terms. In the language of claims, Persson's view says that nobody has a claim to make others worse off if it will not benefit anyone; people have stronger claims when they are worse off than others, as opposed to when they are worse off absolutely.

I agree that relational qualities of distributions have some normative relevance. People often have a distinct claim to a 'fair share' of whatever benefits are available, or burdens necessary. When some completable work needs doing, or we are sharing out some discrete benefit of which we all deserve a share, it is plausible that our *prima facie* attitude should be one of equality. It is unfair if the same person always does the work from which we all benefit, even if the work is not particularly onerous to them. So people may have stronger claims to a benefit simply by virtue of being worse off than others, and in a way that is somewhat independent of how absolutely bad their position is.

However, relational prioritarianism is at the very least an incomplete account of our fundamental concern in distributing goods. Our fundamental concern in distributing should be to improve people's actual situations, even if we also have some concern for fair division.[42] As well as being concerned with getting their fair share, people have significant concern with how things are for them in absolute terms. And while states may well have a role in ensuring structural fairness in the distribution of benefits and burdens, they should also be concerned with how people's lives actually go. By itself, relational prioritarianism cannot recognise important considerations that emerge from absolute conditions. In the distributions below, pure relational prioritarianism says that it is just as important to benefit S in D_6 as in D_5 (where numbers represent welfare and zero represents the threshold of a life worth living):

	S	**R**
D_5	-10	40
D_6	20	70

[42] For instance, we can best explain the common view (e.g. Hume, 1751: Section III, Part I) that justice is not applicable in conditions where there is more than enough for all by an appeal to the absolute conditions of people's lives in such a state.

But while S has a much stronger claim than R in both cases, this is more pressing in D_5 because she is absolutely worse off than she is in D_6. That is, while S certainly has a claim to her 'fair share' in both cases, we commit a far worse injustice when we deny it to her in D_5.

This disparity is seen even in more parochial contexts. If we are sharing a heavy burden, we each have a strong claim that the other does half the work (assuming equal capacity); it is unfair if one of us does most of the work. If the burden is light, it is still unfair, *ceteris paribus*, if the share is unequal. But it is a less significant injustice, since although washing dishes is tedious it does not bother either of us all that much. If this is right, then the force of relational claims is at least sometimes moderated by the force of absolute claims.

Relational prioritarians may claim that the reverse is also true; given scarcity, we can only make sense of claims of justice given an assessment of how badly off you are relative others. But this is false; there can be legitimate claims that are nonetheless legitimately not satisfied due to resource constraints. So we can say that S's claim in D_5 is stronger than R's in D_5, but stronger still than R's in D_6. The practical results may be the same (i.e. we benefit S in both cases), but this should not obscure the theoretical difference; the strength of S's absolute claim is not *moderated* by her relative position, but the likelihood of its being one of the claims that is judged sufficiently strong to be met is reduced or increased. So while absolute priority has a moderating effect on the fundamental strength of relative claims, the reverse is not true. While relative claims matter, absolute claims have fundamental importance.

Otsuka and Voorhoeve (2007) suggest that absolute prioritarians must insist that the additional moral value to benefits for the absolutely worse off applies even to individuals in isolation. But, they claim, it is clear that very different considerations apply to such individuals. If we imagine an individual who is stranded on a desert island, absolute prioritarianism tells us that if she faces a choice between a risky act that promises high reward, and a safer act with more meagre promise, she is morally obligated not to take the risk because if the risk goes wrong then there will be *moral disvalue* to her being in a worse situation than before. This is so even when she reasonably prefers to take the risk because it maximises expected benefit. But, they say, the castaway clearly has no such reason to avoid the risky option; the moral value of being badly off is thus fundamentally comparative. This also looks like a worry for sufficientarians.

This is only a problem for absolute prioritarians if they accept that there is additional moral value to benefits for the absolutely worse off. If we think that moral value is something to which we ought to respond, we can incur impersonal moral commitments to make our own situation better. Even though the only person affected by the castaway's decision is herself, and her expected benefit is maximised by risky action, the additional moral value – on this understanding – of avoiding absolutely bad states compels her to take the action with less expected benefit. But the way I have framed the issue, as being about our claims on one

another,[43] has no such implication. Since the islander has nobody on whom she can make claims, and nobody to make claims of her, issues of justice do not arise.

I have suggested that Persson's version of lifetime equalitarianism is persuasive to the extent that considerations of relative position may have some independent moral force. However, I insisted that our concern with individuals' absolute positions is fundamental; as such, even if lifetime equalitarianism has some plausibility, our fundamental position should be a non-comparative one like sufficientarianism or prioritarianism. Moreover, lifetime equalitarianism is only plausible in a way that overlaps with many of the concerns faced by non-comparative views; even if we think that our concern with people being worse off is partly responsive to relative positions, this need not compete with a prioritarian or sufficientarian view in the way that levelling-down equalitarianism does.

5.2 Sufficiency

While my discussion of time-relative sufficiency in Section 4.3 focused on the lower threshold, this section predominantly concerns the idea of an upper lifetime threshold. The reason for this is that while the defence of time-relative sufficiency relied partly on its providing a lower constraint for more general prioritarian reasoning, lifetime sufficiency is invoked – at least in the context of the Egalitarian Objection – to provide a ceiling on individuals' claims to benefits. I will briefly discuss the idea of a lower lifetime threshold in Section 5.3 but my focus here follows the use to which the principle is put in relevant discussion.

Lifetime sufficientarians claim to identify some total amount of lifetime good above which we either have *no* claims on the basis of justice, or above which our claims are discontinuously weaker. Depending on where this threshold is placed, ageing enhancement may be deemed unjust if many potential recipients have lived a sufficient life, and the necessary resources could be spent on helping others (e.g. young people) achieve a sufficient life.

I defended time-relative sufficientarianism in Section 4.3 by appealing, with some developments, to Shields' notion of satiability. But the existence of satiable claims at particular times does not entail the existence of satiable claims over lifetimes. Lifetime sufficientarians may suggest taking the kinds of claims I appealed to in discussing time-relative sufficiency, and extending them across a lifetime. So, there might be a level of $\sum$ necessary for a 'lifetime' free from significant pain, deprivation or stigmatisation. Similarly, perhaps there is a total level of welfare or opportunity sufficient for a tolerable life, and another level sufficient for a worthwhile life. However, to make this a satiable claim, the idea of a lifetime cannot be open-ended, since otherwise these lifetime claims would require infinite resources. Establishing satiability in a lifetime context thus requires some independent sense of a complete or sufficient

[43] See also Andrew Williams (2012).

life, such that once one has lived for a certain amount of time, one has had enough. It is to such accounts, and how they might ground the Egalitarian Objection, that I now turn.

5.2.1 Fair innings

One option is to appeal to the metaphor of a fair innings. When you have lived a fair innings, your lifespan is such that while it would be good for you to carry on, there is no great tragedy in your dying at this stage.[44] If a fair innings comes after a determinate length of time, it could provide the kind of threshold that lifetime sufficientarians require. It seems clear that if a fair innings approach is to be properly egalitarian, it cannot be based on numerical age alone, since lives of the same length can be of radically different quality. Indeed, not only is age not strongly positively correlated with lifetime welfare or opportunity; there may even be a negative correlation for welfare among the worst off. Since on some views we can have periods of negative welfare, it is possible for someone's total lifetime welfare to decrease as they age, if their situation is bad enough.

Moreover, an appeal to fair innings fails to support the Egalitarian Objection insofar as it relies on the fact that ageing enhancement's beneficiaries will predominantly be elderly in numerical terms, because we should not use numerical age as a criterion for egalitarian distribution.[45] If we take two people of the same age but with radically different quality of life, there is no normatively relevant good of which they have equal shares.[46] So an appeal to fair innings must rest on some other good than age – although it might be correlated with age – such as lifetime welfare, opportunity or resource use. Sections 5.2.2 and 5.2.3 consider two ways of setting a fair innings threshold in such a way as to justify discontinuously weaker claims for those who have breached such a limit.

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[44] Harris (1985: 91) offers a useful outline of the intuitive force of the fair innings argument.

[45] There may be pragmatic justification in certain contexts for using age as a proxy for lifetime shares of ∑, not among the old but among the very young. As the discussion in Chapter 3 of Lazenby's position makes clear, for very young children even the most privileged have had little in the way of lifetime welfare or opportunity, so if they are facing a life-threatening illness, we can guarantee that early death would place them well below a fair innings. Whether or not this priority should be discontinuous depends on the viability of a lower lifetime threshold, discussed in Section 5.3. But it should be clear that age is here used as a proxy for some other good, and not as our measure of a fair innings itself. Moreover, it sets the claims of the young against all adults, not only the elderly.

[46] Bognar (2015) suggests that we should be prioritarians about life years *per se*, noting public support for age rationing when offered hypothetical cases. However, the responses he cites may assume that numerical age tracks e.g. lifetime opportunity; people might respond differently if the older individual were revealed to have had a much worse life or less opportunity. Moreover, he does not explain what is morally relevant about numerical age, once stripped of connections to further facts like lifetime opportunity.

5.2.2 Lifetime good

One might pick a number of years and claim that, so long as they are of a good enough quality, they constitute a complete life. However, it is not clear why we should choose any particular length or quality of life. Crisp (op cit: 762) cites his intuition that 80 high-quality years of life is "more than enough...for any being"; but it seems uncanny that Crisp's intuition aligns with the average life-expectancy of the UK in the year he was writing, according to the World Bank. It is arbitrary to choose a number without any explanation of why *that* in particular is a fair innings, and seems far more likely that Crisp's intuitions reflect his own circumstances rather than anything intrinsically special about living for eighty years.

On the other hand, perhaps tying fair innings to current average life-expectancy within a particular reference class is well motivated because a sufficient life simply *is* the average life expectancy for a relevant reference class. Although Alan Williams does not directly defend the view that we should rely on a statistical average in his seminal discussions of fair innings (1997; 2001), he regards it as the most plausible position, and adopts it as a default. Williams appeals to the idea of 'quality-adjusted' life-years (QALYs) in calculating the fair innings (1997: 121), where the value of an additional year of life is negatively weighted according to the health burdens experienced in that year.[47] On Williams' view, we prefer patients who are projected not to achieve the average quality-adjusted life expectancy (QALE) at birth for a population over those projected to reach it; obviously when two patients are competing for life-saving interventions, this can be reduced to those who are currently under the average QALE, and those over (since if the former are refused the intervention, they are guaranteed not to reach the average QALE). Quality-adjustment is currently used in some healthcare efficiency assessments: the expected *future* benefit of an intervention is weighted according to whether the additional years gained through treatment will contain various ailments or disabilities that reduce their quality; such additional years are valued less than fully healthy years. The key difference between this and Williams' approach is that while consideration of forward-looking QALYs prefers those who will live well in the future, Williams' proposal prefers those who have done badly until now, and/or are projected to do so in the future.[48]

Williams (1997: 129) says that the efficiency level (i.e. cost per additional QALY achieved for a patient) required to justify an intervention should be higher for those who are expected to reach a fair innings than for those who are not. An absolute preference for those projected to fall

[47] Presumably we could in principle add weightings for other, non-health burdens, on the grounds that there is no reason to have egalitarian allocations of healthcare only balance out health-related inequities; I discuss some issues with this extension further on.

[48] One immediate issue with Williams' proposal in distributive contexts is that they ignore the point raised at the beginning of this section that people may plausibly suffer periods of negative welfare. QALYs are always positive, so can never detract from one's total; but presumably this issue is fixable.

below the threshold would have us pour resources into extending the life of someone just below the QALE threshold at the cost of much greater gains for multiple people just above it; Williams' proposal is made more plausible by insisting on weighted rather than absolute preference. It also means that the position does not rule out ageing enhancement altogether; if it were sufficiently efficient, then it would pass the more stringent measures attached to life-extension for elderly patients.

The proposal may also rule out widespread use of ageing enhancement. Many elderly people have already breached Williams' fair innings, so only qualify for very efficient interventions. Whether this includes ageing enhancement will clearly depend on the details, but it nonetheless subjects ageing enhancement to more stringent efficiency tests in many cases than other treatments. Ageing enhancement for elderly people who have lived sufficiently poor-quality lives is not subject to stricter efficiency rules than life-extending treatment for any other age group. So QALY-based fair innings cannot rule out ageing enhancement altogether; it merely may restrict it to a subset of older people. One might thus undercut a major argument in favour of ageing enhancement (e.g. Olshansky et al, op cit; de Grey, *passim*; Bostrom, 2005), that the sheer number of people who would benefit from ageing enhancement sanctions its research as a high priority. If the number of permissible beneficiaries is far lower than proponents of ageing enhancement suggest, then perhaps it should not be a high spending priority.

I will now suggest some concerns about Williams' statistical approach. First, there is an epistemic concern that applies to any distributive rule which depends on an assessment of lifetimes about making access to such complex assessments a requirement of actual distribution. This problem is partly dissipated in a modern state that keeps health records from cradle to grave, but it is not absent. The worry is that in the face of a vast bureaucratic task, we will fall back on using numerical age as a proxy, subjecting elderly people as a class to considerations that, even if Williams' view is right, are only justified for some of them. On the other hand, there may be more reliable proxies, such as poverty or particular disease burdens. It also seems likely that similar issues will arise for many egalitarian theories. Just as there will be a tendency for misreporting if claims are based in part on past experience, basing on claims on mental states such as tolerability, as I have suggested, creates similar worries. The appropriate response, open to Williams as well, is that while the notion of tolerability (or lifetime QALYs) is what grounds moral claims, it is not necessarily available as a foolproof guide to action. There is no requirement that the normative ground for a distributive theory act as its explicit rule of distribution; but the rule of distribution should be our best attempt to approximate the moral principle.

Still, when such generalisations are used in the way that Williams suggests, this pragmatic problem becomes ethically troubling. On Williams' view, being part of a group that on average is expected to breach the threshold means that you are subjected to more stringent efficiency

tests. If an individual has a significantly lower share of lifetime QALYs than their group average, this will mean that they are denied an intervention to which they are in principle entitled, since it lies between the more and less stringent efficiency standards. A lifetime prioritarian view would not face this problem, since although it might make mistakes about particular individuals' lifetimes, those mistakes will not create a discontinuity in access to treatment. Such an issue may also affect time-relative sufficientarians, given their reliance on discontinuities; if we must rely on generalisations about what people find tolerable or worthwhile in policy formation, we may wrongly categorise some people as being above a threshold. But this is mitigated, in a way that is not available to lifetime sufficientarians, by the fact that we can correct general policy by relying on individuals' self-reporting; in general, we should place credence on individuals' claims that they are currently experiencing intolerable pain, for instance, since they have some epistemic privilege in this regard. No such solution is available lifetime sufficientarians, since agents do not have privileged epistemic access about whether their life has been, or will be, above average within a reference class.

An appeal to population averages is also of questionable normative relevance. The fair innings isolates a point at which access to healthcare is restricted. But when statisticians make projections of life-expectancy at birth they must make assumptions about healthcare provision. So when we say that the average life expectancy at birth for a group is, say, seventy, we are already making various assumptions about the health services people will receive, including at age seventy and over. But we risk circularity in using these assumptions to generate conclusions about the health services to which people are entitled. If radical ageing enhancement were available, for instance, we would face a choice whether to include access to it in life expectancy projections. Inclusion raises life expectancy substantially; this means that people are entitled to live to ages that only radical enhancement could enable. Exclusion means people are entitled only to current life expectancies, so enhancement is classed as a luxury for most. Both results are circular, since they assume that people will (not) have access to the particular technology when justifying its inclusion (exclusion).

As with time-relative sufficientarian principles, the central question for fair innings policies is where and on what basis to set the threshold. The fair innings under consideration is set by a society's average QALE at birth. Williams acknowledges that there are various ways of understanding this idea, but maintains that the fair innings "depends for its moral force...upon the existence of some commonly held reference point within each community" (1999: 50). But even if we assume that such a reference point holds within modern communities – which is doubtful – without some sense of the reasoning behind a particular method of setting an average it is hard to see why it should hold moral force.

There are also ambiguities in just how we should frame the average QALE. Statistical averages change over time. The very oldest in a society may be part of a birth cohort that had a lower

average QALE at birth than today's average; but those who have survived have exceeded expectations. A statistical fair innings must decide among various options for setting the average, and specifically for synthesising the distinct averages of various generations.

One option is to calculate the total average of QALEs *at birth* of all people living in a society. Since life-expectancy at birth can change over time, this will at least involve assessing multiple generations. But this is problematic. Imagine that we have just two birth cohorts of equal size, the older of which had a QALE at birth of fifty, and the younger eighty. The average for the younger cohort is higher than the total average, since the latter is dragged down by the older group's average of fifty. This would mean that most people in the younger generation would expect to live beyond their society's fair innings, and so lose entitlement to certain kinds of treatment. But why should they accept this result? After all, the individuals whose historical average is dragging down the overall threshold have already exceeded that very threshold (remember that it is their generation's *average* life expectancy *at birth* with which we are concerned, which must include all the members of that generation who died young). What current moral relevance has the fact that their life expectancy at birth was fifty, when they have all exceeded that expectation?

Alternatively, we might have different fair innings for each birth cohort, indexed to their own life expectancy at birth. This use of cohort averages is also problematic. An individual born into a birth cohort (S) with high rates of infant mortality, for instance, faces a lower threshold than someone born into a cohort (R) with high infant survival, even when those two cohorts co-exist in a society. Members of S who live past infancy are therefore extremely likely to pass their relative threshold. Yet their threshold is lower than R's, even if members of S who survive infancy are more likely to make it to old age than members of R. Members of S will thus be subject to greater stringency at an age where members of R are not, even though that age is nothing exceptional for S, but is for R.

A final approach is to stick with a single average, but defer to current QALEs, abandoning the 'at birth' component of Williams' formulation. Williams worries this will "delay the point at which anyone gets penalised for having more than their fair share, which means redistributing resources *away* from those less likely to survive" (1999: 124). In other words, adopting an average that depends on anything other than life expectancy at birth undermines the purpose of the fair innings as a rationing tool.[49]

If we are concerned with moving resources towards those with lower projected QALEs, then we should adopt a sliding scale applicable to all projected QALY differences, rather than a sufficientarian threshold. The point of setting a threshold is to establish some point at which

[49] Williams (1997: 124) also recognises an argument in favour of this strategy, that as living standards rise, "it is only right that the higher life expectancy now enjoyed by subsequent 'cohorts' should be shared with the earlier ones".

lifetime QALYs make a discontinuous difference to entitlement. Within this framework, a higher threshold 'than expected' is not a reason to reject a method of setting the threshold. What is fair is, on this understanding, *constituted* by our calculated average; so we have no further basis on which to claim it is unfair, or the 'wrong' result, if this is the best way of calculating the average.

At this point, however, we must consider the reasoning behind the use of population averages to establish a fair innings. I have assumed thus far that statistical averages are indeed a reasonable way to judge a fair innings. But it is not really clear why that should be. Perhaps it is unfair for some to have more than average because it is unequal. But this does not explain why there should be a discontinuous allocation principle, since it is also true that it is unequal that some are further below the average than others. An appeal to averages gives us an apparently neat, non-arbitrary level at which to set our threshold; but it fails in the other requirement of a sufficientarian theory, which is to tell us *why* breaching that threshold weakens individuals' claims. What is troubling about the results described above is that we might get two people who have lived very similar lives, but where because of statistical accident one is said to have had a fair innings, and the other not. Tying the fair innings to the statistical average does not place enough weight on how people's lives have actually gone.

On the other hand, the justification of using population averages might depend on a more fundamental normative view of sufficiency. On this view, our appeal to population averages is heuristic, since those who pass the threshold are most certain to have achieved a normative fair innings. Passing the average QALE is merely a signal that one is likely to have led a sufficient life, not constitutive of having done so. The key question is not whether one has had a fair innings, but whether one has lived a 'complete' life.

5.2.3 Projects

Many people judge how their life is going in part by reference to the progress or completion of some central project(s). Some may feel that past achievement makes the prospect of their death less bad because they have lived a full or complete life; perhaps we can establish a sufficientarian threshold at this point.

Such a view must establish how achievements complete a life. McMahan (2002: 139) suggests that we could see whether people would hypothetically trade some amount of additional life for their achievements so far. Although he does not intend it as such, one might think this could ground a sufficientarian threshold. Unwillingness to trade might suggest that a person judges their achievements as completing their life, while willingness to trade suggests their life is not yet complete. The problem is that this view locates the idea of a complete life in finding something that one would not willingly give up. But this captures the idea of necessity rather than sufficiency. It might be true that I see certain projects – such as particular relationships – as so

constitutive of my identity or as having such value that I would not give them up for any additional time, while not seeing them as sufficient sources of value to *complete* my life.

An alternative is to insist on a more objective measure of which projects constitute a complete life. This inevitably faces similar problems to those faced by Callahan's theory of meaning, as discussed in Chapter 1; a view which insists that people's lives are complete, such that it is less problematic if they die, must cope with the fact that some people will simply reject this assessment of their life. So the project view must establish that most people either see or should see the completeness of their life in terms of the completion of projects. Neither of these claims is true. While some people clearly do have such a 'completist' stance on life, others do not, seeing the central value of life in terms of ongoing engagement in particular activities and relationships (I will call this the engagement view). Unless the project account can explain why these latter individuals are mistaken, or how they fit into the idea of a complete life, the completist stance looks like an attempt to stretch a parochial outlook beyond its bounds.

The distinction between the completist and engagement views requires explanation, for which it is useful to first draw parallels with two related distinctions. The first is Strawson's (2004) critique of "Narrativity": the view that our lives both should and necessarily do involve a 'personal narrative' that shapes, and perhaps even constitutes, our identity. A central plank of Strawson's criticism is a rejection of the view that we must see our lives as a unified whole. Many of those who espouse Narrative thinking claim that we ought to see important connections between different parts of our lives. While there can be sub-narratives aimed at different ends depending on the stage of one's life, there should also be a grand narrative aimed at an end that will give a overall shape to one's life.

Strawson reports his own sense that his life is not unified in this way, and insists that this is not a failing on his part. He claims that although he is aware of being the same individual as appears in his memories of the past, his own sense of self is "episodic", such that "one does not figure oneself, considered as a self, as something that was there in the (further) past and will be there in the (further) future". He accepts that he is metaphysically the same person as the one who appears in his memories; but he has no sense of a narrative link between those two aspects of himself.[50]

I share Strawson's sense of disunity. I know that on some metaphysical theories of identity, perhaps even the most plausible, I am the same person as my much younger self; yet I do not see myself as 'narratively linked' with that individual. Although I do engage in projects at particular times, and some of them may be integral to my sense of myself, it is not temporally

[50] There may be a weaker sense of narrativity along the lines that our self-conception is partly constructed by quasi-fictional ways of thinking about ourselves. One could have a 'narrative' identity in this sense without the ideas of connectedness and continuity between disparate parts of life that Strawson criticises, and which is central to my discussion.

extended in the way that the Narrative theory sees it. Those who live 'episodically' do not see their lives as constituted by life-spanning projects since they have little affinity with themselves in the distant past. They can see the value in projects as things which take time and commitment to finish. But they are unlikely to identify the completion of particular projects as making their life complete. This is not to say that they are indifferent to their future; for since Strawsonians may be both metaphysically and psychologically connected with themselves in the future, they may well have sufficient reason to care deeply about what happens to them, including to the extent of making sacrifices in the present. What they lack is the sense of narrative connection between these disparate parts, of the parts all coming together to make a coherent whole, or of there being significant importance to the connections between different parts of their life.

Strawson also criticises the 'ethical' Narrativity thesis, the view that even if we do not then we ought to think of our lives as a Narrative, citing MacIntyre and Campbell as central proponents. MacIntyre suggests that "To ask 'What is good for me?' is to ask how best I might live out [narrative] unity and *bring it to completion*" while the unity of a life is "the unity of a narrative quest...[and] the only criteria for success or failure are the criteria for success or failure in a narrated or to-be-narrated quest". Similarly, Campbell reports a concern, supposedly universal, with "what I have made of my life". Strawson (437) find himself "bewildered" by this idea.

Again, I share Strawson's puzzlement. I am not concerned with what I might make of "my life" considered in the unified sense that Campbell and MacIntyre suggest. I am concerned with what I am making of myself right now, and what I might make of myself in the near future. But those might be very different things; and it is simply not clear why, to the extent that I do take on projects, it is better to be concerned with projects in Campbell's and MacIntyre's lifetime sense than in the Strawsonian sense. While Strawsonians might accept some value, perhaps even central value, in the completion of individual projects, they reject the Narrative view of life itself as a kind of grand project, which is in principle completable.

A second distinction with useful links to the completist-engagement distinction is found in Overall's (2005) discussion of the "career" and "seriatim" selves. The former is a person who "sets himself a course of progressive achievement...and whose orderly life testifies to his self discipline and individual effort", whereas for the seriatim self, different periods "feature central lessons, tasks, pleasures, experiences or bonds...[which the individual appreciates] for their distinctiveness rather than their continuity" (173-181). The completist view seems more in line with Overall's career self, who sees end-goals as defining of life, while the engagement view is more in line with the seriatim self, who lives more in the moment. And again, it is not the case that the seriatim cannot take pleasure in projects or achievements; but she does not take achievements in a completist sense to be the defining purpose of one's life.

My distinction is not identical with Strawson's or Overall's. Overall's characterisation of the career self is as someone who is not content to have a 'final' project; rather, he takes up further and further projects, each propelling him on. So the career self is not a completist in lifetime terms, although one can imagine a career self who is also a completist. Strawson's distinction involves questions of personal identity that are not at the heart of the distinction I want to make. And while the Narrative view as Strawson characterises it typically is completist, he objects more centrally to other aspects of it.

While completists view the central value in life as constituted by the achievement of certain end-states – which may in turn lend itself to the idea that life itself is something that can and should be completed – the engagement view prioritises continued engagement in activities and relationships. Engagement differs in an important way from the completist understanding; there need not be a point at which one is *finished* with an engagement to make it fully realised. Indeed, it is part of the point of some forms of engagement that they resist completion. Think, for instance, of what could be a paradigmatically completist achievement, becoming a parent. This is an important event in a life, and might form part of the completist view of life. The engagement view focuses less on the particular event of becoming, and more on a continuing, evolving relationship with one's children, ground shared with Overall's seriatim individual. While the completist view is clearly able to value such engagement, it seems to value it derivatively as aiming towards an important end, such as 'raising one's children well'. Assume that one ceases to raise one's children when they turn eighteen. The completist view seems to see this as the *end* at which all that engagement was aimed. The engagement view sees this point as significant, if at all, as a marker of a change in the way one engages with one's child (e.g. one might move from a carer to a peer).

The engagement view can certainly make sense both of the value of engaging in individual projects, and of the idea that it is better to have had more experience of valuable relationships and activities than less. The engagement view sees the harm of death in one sense as removing us from valuable processes that we are engaged in. But it can also accept that having had more time to enjoy life is better for an individual; it is not the claim that there is no normative difference between a short and a long life. But the engagement view does not sit easily with the idea of a complete life; for at least some of the processes that are central to life's value are precisely *not to be completed*. Rather, the engagement view seems more naturally to pair with lifetime equalitarianism or prioritarianism; we can accept that there are requirements of justice relating to one's (relative or absolute) lifetime experiences, without thinking that there is some threshold that marks the complete life, and so marks a point at which one's claims become discontinuously weaker based on lifetime experience.

Without the notion of completeness that grounds the fair innings threshold, the lifetime sufficientarian view has little appeal; we are left either with an arbitrary threshold or with

abandoning the idea of a lifetime threshold altogether, moving towards lifetime priority (the latter of which I defend in Section 5.3). Once we have abandoned the idea of a determinate threshold, the kinds of arguments that Williams offers, among others, suggest that *any* pair of competing individuals should be judged according to which has had greater valuable engagement. A lifetime prioritarian acknowledges that rationing has to occur, and insists on some level of preference for those who have had less overall; a sufficientarian view also takes that perspective but, in utilising an upper threshold, insists that it is distinctively bad to die before it, whereas the deaths of those above the threshold cannot be too bad, since they have had enough anyway. This stance denies the enormity (an enormity that is not lessened by the fact that it is commonplace, or necessary) of a decision to allow someone to die by claiming that it is distinctively unproblematic for certain people to die, regardless of how they feel about it.

5.2.4 A subjective lifetime threshold?

Chapter 4 argued that time-relative sufficientarianism should be based on an underlying normative appeal to subjective attitudes such as tolerability and worthwhileness, even if we must for pragmatic reasons rely on certain generalisations at the level of policy. Perhaps lifetime sufficientarians could make a similarly subjective move, and claim that someone's life is complete simply when they judge it to be so. This would avoid the issue of fundamental disagreement associated with other lifetime sufficientarian views.

However, there is a problem with relying on such subjective assessments when it comes to lifetimes that does not affect a time-relative application. Individuals' subjective assessments of particular times – and indeed periods of time such as an entire life – often change depending on when the assessment takes place. Given this conflict, we need to decide which assessment to consider normatively authoritative. For assessments of particular times, there is an obvious choice: we should look to the individual's view at the time in question. What is relevant is whether her experience is, for instance, actually tolerable to her then, not whether she deems it tolerable at some other time.

But it is less clear if there is a single, obvious perspective for the normatively authoritative assessment of lifetimes. It may seem that the obvious choice is to rely on the individual's assessment at the point at which we deciding whether she has lived a complete life i.e. when she requires life-extending treatment. But this is problematic. A judgement about whether one's life is complete will depend fundamentally on one's assessments of particular periods. And people's attitudes to particular periods or events in their pasts can change radically, not only due to imperfect memory and psychological bias (see e.g. Kahnemann, 2011) but also in a fundamentally normative way.

Consider a particular act that an individual S committed in her youth. At the time, she regards it as deeply shameful, and resolves that her life will be incomplete unless she atones for it. In her old age, however, her normative profile has changed sufficiently that not only is she not

ashamed, but is in fact proud of her behaviour. So her life is complete according to her elderly assessment, but deeply incomplete according to her youth. The question is why we should accept as authoritative the elderly person's assessment. What we want to know is whether they have *had* a complete life, not whether they consider themselves to have had a complete life. And I suggest that, if neither view is authoritative, there is no fact of the matter about whether S's life is complete. This is not a mere problem of measurement; it is not that one might make a mistake in assessing how one's life has gone. Rather, it is that there is no reason to regard even a clear-minded assessment as authoritative. We are considering a lifetime principle; that principle should be concerned with how a life actually went, not how it seems to have gone in retrospect.

In assessing how a life has actually gone, we might aggregate or sum the particular momentary assessments to get a lifetime assessment, relying on an agent's assessments at the time rather than in retrospect. But while this helps prioritarians and equalitarians, it is little use for lifetime sufficientarians. Prioritarians and equalitarians are interested in (respectively, absolute and comparative) totals; on an aggregative assessment, we can say in principle what the total amount of worthwhile or tolerable time in someone's life was. But a sufficientarian view requires a further, normative assessment of whether that total is *itself* sufficient. If this depends on a further subjective assessment by the individual of whether they regard that total as worthwhile or tolerable, or whether they are content with it, this reintroduces the above problem. Why should their assessment now be regarded as authoritative?

One response is, because it is *now* that we are asking people whether they are ready to die. But that makes it puzzling why we should rely on the idea of lifetime sufficiency at all, rather than directly on the question of the individual's desire to live or readiness to die.[51] That may be informed by a current sense that one has had a sufficient life; but that is a fundamentally different normative basis from the claim that there actually is some principled subjective determinant of a sufficient life.

More practically, such a subjective lifetime principle raises the possibility that some individuals would never achieve a fair innings because they will never judge their lives to be complete. This raises a corresponding worry for time-relative sufficientarianism which I did not consider in the previous chapter. If people have stronger claims when they are below a subjective threshold at particular times, isn't there a danger of some people's thresholds of tolerability or worthwhileness being so high that they place unreasonable demands on the rest of us? Just as lifetime sufficientarians will get only limited rationing capacity from a strongly subjective

[51] This should not involve reliance on patients' *stated* willingness to die as an explicit rationing tool, simply because stated willingness can come from other reasons than actual readiness, such as a feeling that one is a burden. And perhaps if genuine readiness to die is otherwise impossible to measure, such a principle is unlikely to be translatable into policy.

lifetime threshold, aren't time-relative sufficientarians opening themselves up to effectively endless commitments?

It is possible that some individuals will have genuinely high thresholds for tolerability or worth. A time-relative sufficientarian must find a way to acknowledge these claims without allowing such individuals to dictate allocations to their own benefit at the cost of many others. This is perhaps especially worrying because of the phenomenon of elastic preferences. We tend to adapt to new situations in two ways. We often adjust to a drop in living standards by coming to find what we previously deemed intolerable to be tolerable. But the reverse also seems to be true; when our standard of living increases, our notion of what is normal, and even tolerable, often rises with it. Locating special claims in the notion of tolerability might thus seem likely to reinforce unfair inequalities in living standards on the ground that the better off will find intolerable situations that the worse off will not.

It is open to time-relative sufficientarians to rest some significance on the length of time that someone will spend below the threshold; so even if someone finds a drop in living standards temporarily intolerable or worthless, this will not strengthen her claim to the same degree as a drop to standards that the rest of us might regard as permanently so. Nonetheless, this response does acknowledge some stronger claims on the part of this person. But sufficientarians should also be quite strict with their notions of subjective tolerability and worth. Feeling squeamish or unhappy about your situation is not the same as finding it intolerable. Finding that one's life is not as one had hoped is not equivalent to considering it not worthwhile. Put in these terms, the phenomenon of elastic preferences looks less threatening; many people who claim to find just any reduction of high living standards intolerable or worthless are being insincere, or exaggerating.

Moreover, time-relative sufficientarians need not necessarily feel embarrassed about seeing a stronger reason to help someone who finds intolerable or non-worthwhile a situation the rest of us do not. Sufficientarians may need to bite a bullet and accept that someone who genuinely finds their situation intolerable does have a stronger claim on our help than someone who does not, even if the former appears to have a better life than the latter.[52] Since the view does not commit us to an absolute obligation to help, such claims can still be outweighed by considerations of efficiency, for instance.

Subjective lifetime sufficientarians might make a similar move, and claim that although individuals' assessments of whether their life is complete are fundamentally important, we are entitled for reasons of efficiency to deny treatment to some individuals who do not feel that they have achieved a complete life. And of course that is true; when we cannot help everyone, we sometimes need to deny legitimate claims. But the fundamental difference between the

[52] Note that this aid need not involve restoring someone to their previous lifestyle, but could instead involve helping them to adjust to their new situation with which they are struggling to cope.

lifetime and time-relative views in this regard is that while the notions of tolerability and worthwhileness apply to everyone, even if they make these judgements at different points, the very metric inherent in the lifetime sufficientarian view – the complete life – seems not to apply for many people. So while time-relative sufficientarians face a (considerable) problem of efficiency in applying their principle, complete life theorists are attempting to implement a normative vision on individuals to whom it does not apply. The idea of a complete life, while it appeals to some, seems inapplicable to many people: as Harris (2002a: 19) puts it, "Apart from convenience it is difficult to see how fair innings conceptions of the value of life or the entitlement to live could be imposed on those who don't accept them".

5.3 Priority

Neither a statistical, normative, nor subjective view of lifetime sufficiency is plausible. Since I have argued that lifetime equalitarianism cannot represent our fundamental concerns even at its most plausible, lifetime prioritarianism is the only option left if we are to adhere to any form of lifetime egalitarianism. Of course, I also think that there are positive arguments in favour of this view. The appeal of lifetime prioritarianism is very similar to the appeal of time-relative prioritarianism; if one aim of a social system of benefits is to try to make things go as well as possible for individuals, given their competing concerns, then those whose lives are absolutely worse have a *prima facie* stronger claim on benefits. The central reason for abandoning time-relative priority for time-relative sufficiency is that priority alone struggles to reconcile distinct claims of hardship, responsibility and intrapersonal compensation. But I will argue that the lifetime view can accommodate this tension.

Lifetime prioritarians claim that individuals' claims become stronger as their overall lives are absolutely worse. This relationship proceeds in a continuous manner, unlike the discontinuities associated with sufficientarianism. The strength of someone's claim is based on their absolute position; but of course, even though prioritarianism is not fundamentally concerned with relative positions, conditions of scarcity mean that we must compare absolute claims and assess their relative strengths. Under such conditions – which are the conditions of society – those whose lives will be absolutely worse overall can appeal to the idea that it is their turn to benefit in a competition with those whose lives will be absolutely better overall. Since the latter will have better lives overall, more of their claims have been met; so those with absolutely worse lives have stronger claims on the basis that it is their turn to benefit, even if the good will be of equal benefit to either person.

Lifetime prioritarianism applies even if everyone is very well off. This idea may seem a mark against the theory; surely, sufficientarians might insist, there comes a point when people's lives are *good enough*, and we have no reason whatsoever to help them. But even if one's life is very good, it could usually be better, simply by adding more of the same good i.e. by extending it. And I see no reason to reject someone's claim to their life being made better in this way except

insofar as others have stronger claims. It may be that some people reach a point where their lives cannot be made better, either because they are 'saturated' by existence (as Elina was in Chapter 1), or because they are simply in an irremediable health position. But then prioritarianism also faces no problem, because people cannot have claims on benefits that do not exist; and if we cannot benefit someone, then no benefit exists to which they have a claim.

Prioritarianism also need not suggest that there is anything particularly pressing about the claims of the well off. While equalitarianism must insist that there is something morally amiss about the position of the relatively worst off, even if they are absolutely very well off, prioritarianism simply insists that those who are absolutely worst off in a particular distribution have stronger claims than those who are best off; but the claims of even the worst off in a utopia could be weaker than the claims of all but the very best off in the actual world. In fact, it may be that these claims are so weak that they are outweighed by factors that are not sufficient to outweigh most distributive claims in the actual world, e.g. the efficiency costs of working out who is among the worst off; the property claims of the best off; or simply the effort of whomever has to engage in distribution. Lifetime prioritarianism need not claim that we must benefit even the very well off whenever we can.

Having rejected time-relative prioritarianism in Chapter 4 due to a tension between hardship on one hand, and compensation and responsibility on the other, one might worry that the same reasons should lead us to reject the principle on a lifetime basis. However, I will now suggest that, just as the switch from the time-relative to the lifetime scope weakened the plausibility of sufficientarianism, the same switch allows prioritarianism to surmount the problems it faces at the time-relative level.

5.3.1 How lifetime prioritarianism accommodates the tension

If S sacrifices her position at a particular time in return for being better off later, part of what makes it seem odd to grant her a stronger claim is that her sacrifice makes her life overall better. This is the crux of Bou-Habib's compensation condition. People balance benefits and harms across time; if we interfere to make sure that they are not any worse off after making sacrifices, we would either have to ban such compensating trade-offs, leaving the connection between our view of justice and individuals' views of their own good rather suspect; or we would have to commit to funding all gambles and pragmatically rational trade-offs, an unsustainable policy that generates numerous moral hazards.

The plausibility of the compensation condition depends in part on the ability to appeal to a 'bigger picture'; while S is worse off now, she will (or at least can reasonably expect to) be better off overall. One way to differentiate time-relative and lifetime prioritarianism is to insist that lifetime assessments lack such a broader context, since a lifetime is the broadest (personal) context there is. We defer to the fact that S's life improves to justify not intervening in the sacrifices she makes at particular times; but it may seem that there is no broader perspective that

gets better for S when her life goes worse overall. If so, compensatory tradeoffs would be impossible in a lifetime sense, and so one of the central complications to a prioritarian view would not trouble lifetime prioritarianism.

But this argument misses an important fact, that people can reasonably sacrifice some lifetime value for extra value at particular times. Indeed, the situation seems roughly parallel; in one case S sacrifices current gain for a greater future good, and in the other she sacrifices a greater future good (thus worsening her life overall) for the benefit of gaining now. Some have suggested that the latter decision is clearly irrational since it violates the 'objective' principle of having equal concern for all points in one's life (e.g. de Lazari-Radek and Singer, 2014: 126-127). As I have suggested, I suspect that our relationship with different parts of our lives is more complicated than such temporal neutrality supposes. But even if the neutralist view is correct, temporal neutralists must acknowledge that the future is subject to greater uncertainty than the present; so some discounting of future benefits is rational. More importantly, the irrationality of a decision is not sufficient to generate an obligation to intervene in every such case. The compensation condition relies on our sense that people should be allowed to make the trade-offs that appear reasonable to them; there is no stipulation that those trade-offs must conform strictly to rationality. So the above attempt to draw a distinction between lifetime and time-relative prioritarianism will not work.

However, there is still a relevant distinction between the two principles, with regard to the relationship between compensation, insufficiency and responsibility. Lifetime prioritarians can claim that when a change in S's circumstances has the effect of making her life worse, she acquires a stronger claim against us unless the reduction is down to S's exercise of her responsibility, or intra-personal compensation. This makes room for both of these notions within a prioritarian framework. I rejected a similar response for time-relative prioritarians because it ignores significant hardship. But this problem does not arise for lifetime prioritarianism. For unlike time-relative prioritarianism, lifetime prioritarianism can itself be constrained by time-relative sufficiency. Lifetime prioritarians can say that when S's life gets worse due to exercises of personal responsibility, she does not acquire the usual stronger claims *unless* those reductions bring S below time-relative sufficiency. This allows for responsibility and compensation, but without the problematic implications surrounding hardship which affect time-relative prioritarianism.

Could time-relative prioritarians make an analogous move, and appeal to lifetime sufficientarianism? My discussion of lifetime sufficiency in Section 5.2 focused on the idea of an upper threshold, but lifetime sufficientarians might also insist on a lower threshold. At least in some cases, a lower lifetime threshold avoids some of the problems associated with this view. To take an extreme instance, it seems unproblematic to suggest that an individual who has had no tolerable moments in her life, and dies very young, has not had a sufficient life. We do not

need to appeal to the idea of a complete life, or statistical averages, to make sense of this. So, time-relative prioritarians might argue that they can respect a concern with hardship. This view would say that when people are worse off at particular times, they have stronger claims to benefits unless they are responsible for their position, or will be compensated at another time. This would apply even if they were very badly off at that time. However, if their decisions meant that they would live an insufficient *life*, then our concern with hardship should intervene, and we should prevent their decision or compensate them sufficiently to make their life tolerable again.

However, while this view is more plausible than the argument for an upper lifetime threshold, it still faces at least one problem associated with that view. I claimed that the lifetime sufficientarian faces a problem in choosing a particular point from which to assess a life. This applies to the assessment of whether that life is tolerable just as much as it does to the issue of whether it is complete. While there may be some extremely intuitive cases – e.g. an individual who has no tolerable moments in her life can be assumed to regard her life as intolerable from every vantage point – other cases face the same theoretical problem.

Even if this worry is surmountable, a view constraining time-relative priority with lifetime sufficiency seems to miss the point of a concern with hardship. While our concern with the fact that some people suffer extremely bad lives can be reduced to a concern that they suffer from time-relative insufficiency at so many times, a concern with a lower lifetime threshold seems to miss many relevant instances of hardship. Imagine a person nearing the end of her life. She may have had a very good life, sufficient to regard it as on balance tolerable. If in her final years she suffers tremendous hardship, a view that is concerned with insufficiency *only* in a lifetime sense misses something of great moral importance, which is her current hardship. So even if there are no theoretical impediments to a view that constrains time-relative priority with a lower lifetime boundary, it does not seem to me to capture the concerns that motivate having a separate time-relative principle in the first place. On the other hand, the opposite view that constrains lifetime priority with an appeal to sufficiency at times captures those concerns very well.

5.4 Summary

This chapter considered various options for a lifetime distributive principle. I rejected one version of lifetime equalitarianism on the grounds that it recommends levelling down. I accepted that people do have some claims of justice on the basis of relative position, as suggested by Persson's 'relative priority' version of equalitarianism, but insisted that our fundamental concern should be with absolute positions. I then considered three ways of justifying lifetime sufficientarianism, each of which grounded a distinct form of the Egalitarian Objection. The first rested on the idea of statistical averages, but failed to explain why an above average life should be considered sufficient. The second relied on a normative idea of projects; I suggested several problems for this position, the most fundamental of which is that it relies on a

view of a complete life that seems alien to some people. The third set lifetime sufficiency by appeal to subjective assessment; this view faced significant problems that a time-relative version of that appeal does not. Finally, I suggested that lifetime prioritarianism can avoid the problems associated with time-relative prioritarianism; it does so by working in tandem with time-relative sufficientarianism, which justifies my choice of SP as a distributive scheme covering both lifetime and time-relative claims.

While I have considered the implications of both lifetime equalitarianism and sufficientarianism for the Egalitarian Objection, I have explicitly avoided doing so in this chapter for lifetime prioritarianism. This is because, having now taken a position on both the time-relative and lifetime rules, it makes more sense to consider them together, and how they relate, when assessing the Egalitarian Objection. Chapter 6 does that.

Chapter 6: The Egalitarian Objection – Interaction of principles

I have advocated concern for sufficiency at times, and priority for those whose lives go worse overall. This chapter considers how these principles relate. One option is to treat lifetime priority as fundamental, always preferring those with worse lives, but with time-relative sufficiency deciding between equally bad lifetimes. This ignores hardship too readily; many who suffer insufficiency at particular times are not among the worst off in lifetime terms. Making lifetime priority lexically more important than time-relative sufficiency effectively consigns the latter to irrelevance. Alternatively, we might take time-relative sufficiency as fundamental, and use lifetime priority as a tie-breaker. We would have particularly strong obligations to help those who were currently badly off, but if we could not help everyone in that situation, we prefer those with worse lives overall. Huesch (2012) suggests a resourcist version of this view, while Overall (2009: 335) seems to favour an opportunist version, although her view is complicated by a concern with reparative justice, which I discuss in Section 6.4. A tie-breaking view needn't rule out ageing enhancement in principle, but might severely restrict it in practice if beneficiaries will primarily be among the best off in lifetime terms, and we could typically divert resources to life-extending interventions for those with worse lives.

Section 6.1 considers a version of the Egalitarian Objection based on this prioritarian tie-break view and the idea of fair turns. I acknowledge that this is a plausible way to combine these principles, but suggest that the use of lifetime priority as a tiebreaker among the very badly off is problematic. Section 6.2 considers one explanation of this, Daniels' claim that healthcare is 'special', but rejects it as being unable to accommodate the role of social determinants of health. However, Section 6.3 argues that we can explain why it is inappropriate to use lifetime tiebreakers in particular cases of 'rescue'. Section 6.3.1 fills in the idea of rescue in the light of several recent criticisms of that concept. Section 6.3.2 outlines a different role for lifetime priority based on more general allocation, and considers some prioritarian concerns based on financial access to ageing enhancement that might undermine the justification for the state investing in it, while Section 6.3.3 considers how the state should react to private investment and use. Finally, Section 6.4 considers how we should incorporate healthcare distributions in responding to existing and past injustice.

6.1 Fair turns

Huesch contrasts the fair innings with a "fair turn at the bat", which involves giving people equal levels of medical resources whether or not those resources give someone a 'reasonable' lifespan. The idea of turns has obvious connections with my account, outlined in Section 5.4, of how prioritarians can approach comparative claims. This principle is focused solely on healthcare-related resource consumption (Huesch addresses organ transplants, but intends the idea to apply more widely) when considering access to future healthcare resources. Huesch acknowledges that this may seem unfair, since many people who have high consumption of

medical resources do so because of material, social or physical disadvantage, but considers this a first step toward a broader rationing based on resource consumption in general. This is a mistake because his principle would exacerbate existing inequity, and hence take us further from a fair distribution; if we implement prioritarian rationing, it must have a broader scope than medical consumption, reflecting as comprehensive a lifetime assessment as possible.

It is important at this point to note two broad distinctions that emerge in the allocation of resources, particularly relevant in healthcare. One is the distinction between micro-allocations – deciding whom among individual competitors should receive some treatment, e.g. a new heart when only one is currently available – and macro-allocations, which cover broader spending decisions and funding programmes.[53] The former must take place within context of the latter.

The other distinction is that between divisible and indivisible resources. Some resources are obviously indivisible; even if two individuals are equally good candidates for an organ, we cannot usefully split it in two. But a seemingly clear example of a divisible resource, money, is not so simple. While money can be divided in very fine-grained ways, this cannot always be true in spending decisions. If two people compete for the funding of their treatment, and the money allocated by a macro-allocation is not sufficient to cover both of them, splitting the money between them would be almost as unhelpful as offering them half an organ each. Money is more obviously divisible (though not infinitely so) in the context of macro-allocations. Deciding that one group of patients or condition has a stronger claim than another does not necessitate that they get all the relevant financial resources; saying that group R has a stronger claim than group S does not entail that all members of R should be treated before all members of S.

I will initially assume that the fair turn view would implement turns in both micro- and macro-allocations, and for both divisible and indivisible resources. This has two possible implications for ageing enhancement. First, if beneficiaries of ageing enhancement are likely to be among the best off, this view might oppose macro-funding of enhancement since many potential beneficiaries have had their turn. Second, even if we ignored this macro-level possibility, a strong insistence on turns would mean ageing enhancement was unavailable for the best off at the micro-level, since worse off patients would always have a stronger claim, and so availability would be restricted to a subset of the population.

I will argue that, contrary to this view, the idea of fair turns should not prompt us to use lifetime priority as an automatic tie-breaker in cases where competitors risk 'irremediable insufficiency', which includes those covered by ageing enhancement. However, this does not mean that lifetime priority has no role to play; at the micro-level, it is theoretically permissible to allow lifetime priority to affect patients' weighted *chances* of accessing scarce resources, although this faces practical difficulties; in the case of divisible resources, such cases can allow lifetime priority

[53] This is somewhat simplified, since macro-allocations also cover decisions about the overall health budget in relation to other expenditure as well.

to affect proportional *spending* at the macro level i.e. to allocate greater priority to health spending on groups whose lifetime positions are worse, which may include the very young.

Rejecting the role of lifetime priority as a tiebreaker in some cases does not mean rejecting it as a tiebreaker in all cases. Lifetime priority is certainly relevant when people are above time-relative sufficiency, and might be used as a tiebreaker in these cases for indivisible goods; when two people are at the same level at a particular time, we should automatically prefer to allocate a benefit to the one with the worse life, where possible. However, things are different in at least some cases where people are below the lower sufficiency threshold, or at risk of becoming so. These are circumstances when we ought not to use lifetime priority as a tiebreaker. Section 6.2 considers an initial approach to the idea that at least some time-relative allocations should be immune from lifetime considerations. This is Daniels' view that our allocation of healthcare – and more recently other health determinants – is 'special'. My own account in Section 6.3 takes its cue from where Daniels' account goes wrong.

6.2 Is healthcare special?

Daniels (1981: 146; 2007: 18) claims that we are, and ought to be, less tolerant of inequalities in healthcare than in other goods, and that this implies that healthcare is in some way 'special' because of the relationship between health and basic opportunity. Segall (2007: 346) suggests that, for Daniels, this idea extends to rejecting the exclusion of those who have had good lives on egalitarian grounds, as a tie-breaking prioritarian view might do, and implies that healthcare distribution should be isolated to some degree from distribution of other goods.

This position looks unstable. If healthcare is special because of its effects on health and hence opportunity, other factors that affect health and so have similar effects on opportunity are special too. The 'social determinants of health' (SDH) are such factors: we now recognise the broad array of determinants that can affect health, including wealth, housing, education, sanitation, and social status. As Wilson (2009) notes, Daniels might extend 'special' status to SDH; but while we plausibly value healthcare only for its impact on health, SDH comprise most of the goods in which we have prior interest from the perspective of distributive justice, for reasons independent of their impact on health.

Wilson assumes that isolating SDH and healthcare would involve isolating them *collectively* from our mainstream distribution, but not from one another. This is a plausible reading of Daniels; the reason for isolation is the effect of SDH on a single factor, health, because of its fundamental relation to opportunity. 'Collective isolation' would allow interactions between determinants of health, but not interactions between these determinants and our more general distribution.

However, if we isolate everything that falls under SDH from our 'general' theory, the latter hardly deserves to be called general any more. Once we have stripped out everything that has

some effect on health, little is left. If almost everything is 'special', the term seems to have lost its meaning. Wilson also demonstrates that on this collective isolation theory we could not allow transfers between different SDH on the basis of anything other than their impact on health. Allowing transfers on other grounds, such as fairness, would bring our SDH distribution back into contact with the general distribution. Yet egalitarians typically want to compensate for a lack of some social goods quite independently of their effect on health; even if we agree with Daniels that health is special, it is surely not that special. Finally, because income is a SDH, collective isolation rejects a stance that motivated the specialness thesis in the first place, at least for Daniels: that access to healthcare should not depend on wealth, for rich or poor. Since wealth is a SDH, a policy of collective isolation should allow transfers in healthcare to balance out inequities in wealth, to the extent that the latter affect health. The flipside of isolating so much from the general theory, on this reading, is that relatively little gets truly isolated.

Daniels might instead claim that we should isolate SDH and healthcare even from one another. This would reintroduce the idea that lifetime resource consumption should not reduce entitlement to healthcare. But such a stark isolation introduces an even worse version of one of Wilson's objections, for now we cannot even allow interactions between SDH when it would improve people's health. We would have to distribute each determinant, including healthcare, on the basis of its individual impact on health, even if allowing interactions would improve collective health, or lead to a fairer distribution in Daniels' preferred opportunity terms.

Daniels has responded to these worries, saying that all he means by the specialness claim is that healthcare makes a "significant contribution to something of central importance" i.e. opportunity (2009: 37-38). Specialness explains why we feel the need "to meet health needs more equally than we do preferences for many other goods". But this sounds rather like the claim that the distribution of healthcare should be isolated from other distributive considerations, which is what was problematic to begin with. Daniels agrees that calling SDH special as well risks "trivialising the claim about special importance". But he does not address the further issue of whether this impugns our practice of meeting healthcare needs 'more equally'. If that 'more equally' does not imply that we should consider health needs in (perhaps partial) isolation from other claims, I am not clear what it does mean. But if it does mean that, then the refusal to isolate SDH, while acknowledging that they also play a similar role to healthcare in determining opportunity, is unjustified.

The only way we can avoid this arbitrariness is by finding a feature of healthcare that is not shared by SDH. I do not think that such a feature is generically available. The next section instead suggests that we can explain the appeal of our sense that we should not exclude people on the basis of lifetime considerations from *some* forms of healthcare, namely those that constitute rescue. However, this category clearly applies to some interventions in SDH as well,

and so does not challenge Wilson's claim that we cannot maintain a neat line between 'healthcare' and other interventions or goods.

6.3 Rescue and turns

I suggested in Section 5.3 that deciding between competing claims according to lifetime prioritarianism can be understood in part by reference to the idea of turns. Huesch's proposal clearly makes use of this idea, suggesting that in the context of resource scarcity, those who have already received some medical resources have had their fair turn. The version of SP under consideration, then, operates a two stage process. Time-relative sufficientarianism considers whose claims are of particular urgency; lifetime priority then acts as a tie-break by appealing to turns among those people. If competitors have similar claims based on their time-relative position – both will die without intervention, say – prioritarian turn-based claims are decisive.

But using lifetime priority as a tie-breaker is inappropriate in an important subset of cases. In many cases where an appeal to turns seems appropriate, even in cases where the costs of its not being your turn are significant, the individual who is not selected for a benefit nonetheless retains the possibility of benefitting later on, or of their position improving in some other way. In other words, their position remains remediable. I will suggest that when people compete to avoid dropping *irremediably* below sufficiency, the application of turns, at least as an automatic tie-breaker, is no longer appropriate. If the idea of turns is a plausible feature of distributive justice then, I will argue, we should isolate the allocation of some interventions that *rescue* people from irremediably falling below sufficiency from such turn-taking considerations. Such cases involve a potentially final chance for someone to avoid falling below an important threshold. An insistence on turns even in such cases fails to recognise the finality of the situation that competing individuals find themselves in when they require rescue. Death is a clear example of this kind of case, but access to palliative relief from considerable pain also fits this model.

Why is it inappropriate to apply prioritarian tie-breakers in such cases? Consider some indivisible set of lifesaving resources for which S and R are competing. Both have equal time-relative claims for aid, but S has had less in lifetime terms, either because she has a worse quality of life, or because she has had the same quality of life but is younger. Using lifetime priority as a tiebreaker automatically allocates the resources to S. When it comes to divisible resources, things may seem different; tie-breaking does not recommend giving *all* resources to S, only what she requires so she can avoid insufficiency. So it may seem that a tie-breaking allocation permits us to give (some of) the remainder to R, and perhaps this will be enough to save him too. But this is misleading. When S is treated, R's claim becomes stronger than S's on the grounds of sufficiency; even if S still has the worse life, her time-relative status now fails to qualify her for consideration.

But to justify benefitting R under a tie-break system, we would need some reason to restrict R's competition to S alone. In some cases this is well motivated. When the relevant resources –

such as organs – are not durable, once S benefits from them we may help R or nobody. In such cases, we have a principled reason of efficiency to restrict our competition to S and R. But many resources, including money, are durable; so R's claim must also compete with the claims of those who will face insufficiency in the future, and will be worse off than R is now in a lifetime sense. If lifetime priority is an absolute tiebreaker, we have little reason to offer resources to R under a tie-breaking principle if they can later be used to help someone who is worse off in a lifetime sense. The only possible reason we could have involves an appeal to the comparative certainty of R's need; he is right in front of us, and we can definitely help him. But given the prevalence of healthcare needs in the world, this consideration is sufficiently weak that we can ignore it; there is almost certain to be someone in the future whom we can help, and who has a stronger lifetime claim than R does. As such, using lifetime priority as a tie-breaker effectively excludes the best off from a great deal of public healthcare treatment entirely, since they will always compete with someone, perhaps in the future, who has an equal time-relative claim, but a greater lifetime claim.

A prioritarian tie-break view assumes that since S and R have equal claims from one perspective (time-relative sufficiency), these claims simply cancel one another out; fair distribution thus depends entirely on their claims in another area (lifetime priority). Since S's claim is stronger than R's in the latter respect, she automatically wins if we aggregate their claims. But this completely ignores R's time-relative claim,[54] even though it is based on a morally considerable feature of his situation. A fully aggregative view of claims negates the moral importance of significant claims when they are equal.

An alternative, non-aggregative view sees the various claims that an individual might make as distinct, and not fully commensurable. It denies that whenever people are tied on the basis of some morally important claim to a good, we may or must turn to some other claim – on the basis of which they are unequal – to comprehensively decide the matter. As Munoz-Dardé (2005: 200) puts it "two reasons may sometimes combine, but reasons do not become conclusive by juxtaposition".

Claims based on lifetime priority do not speak to the same kinds of concern as those based on irremediable insufficiency. From the lifetime perspective, ageing enhancement can be seen primarily as extending life, i.e. adding years to a running total. And perhaps from this perspective it makes sense to say that stronger claims go to those who have had less of the relevant good (which is not, I have suggested, the number of years one lives itself, but may be somewhat correlated with that measure). Many opponents of the Egalitarian Objection seem to

[54] Taurek (1977) makes a related claim with regard to whether the number of lives to be saved should count; he suggests that we should give an *equal* chance to groups that compete for benefits no matter their size. But as I will suggest, when it comes to groups we can more easily implement proportional weightings.

view ageing enhancement solely from a lifetime perspective i.e. as a bonus addition of years onto an already lengthy life. But this is not the only perspective from which we should view ageing enhancement, for it also averts irremediable insufficiency at particular times.[55] From this perspective, ageing enhancement protects a morally distinct core of interests which, once lost, cannot be regained. It is true that each of us will eventually lose this core, for we will all die some day; but from a time-relative perspective, our concern is with particular times. Just because I must die in the future, that does not mean that I do not have a strong, morally relevant interest in not dying *now*.

So, having lifetime priority decide matters as a tie-breaker ignores the distinctive strength of R's sufficientarian claim. However, this does not mean that we should only consider time-relative claims; this would face the reverse problem, ignoring S's stronger lifetime claim that reflects something morally important. Ideally, then, allocations would respect both time-relative and lifetime claims, even in cases where only one individual can benefit. One option is to give higher *weighted* chances to be selected for a benefit to those who have stronger prioritarian claims, including those with lower prioritarian claims, but with a lower weighting; this allows some role for lifetime priority, but also recognises the importance of time-relative sufficiency by giving all those with a time-relative claim a chance to benefit.[56]

The thought behind this is that if people have equal claims, they should receive an equal chance; so a move to unequal, but still sizeable claims should prompt us not to act as if one person's claim has been eliminated entirely, as appealing to prioritarian tie-breakers would, but to move to unequal chances. For instance, if flipping a fair coin would in principle be a fair way to decide between two patients with equal claims – giving them a 50:50 chance – then for two patients with equal time-relative claims, but unequal lifetime claims, we would move to a weighted lottery that gave both patients some weight due to their time-relative claims, but greater weight to S proportional to the greater strength of her lifetime claim.

There are practical issues of efficiency in executing a weighted lottery every time a patient conflict arises for indivisible resources, particularly in emergency situations. It is more feasible to allocate greater weight for patients on the basis of lifetime priority for treatments that are allocated by waiting lists – a category which could include ageing enhancement if it is widely

[55] This is not to say that a time-relative stance is unaffected by longer-term considerations. If we are to avoid bias towards the present, then we will prefer interventions at stages that protect sufficiency at multiple times. An effective anti-ageing intervention might be one such intervention, but this may also imply some preference for interventions at particular stages of childhood since, as Powers and Fader (2006: 186) point out, "Without a sufficient level of health in childhood, systematic constraints on well-being that are inescapable are locked in at an early age."

[56] For a related proposal on how group size should count, see Kavka (1979: 293); Timmerman (2004); Saunders (2009).

adopted – as one of a number of features that determine priority. However, there are still problems with applying weighting to micro-allocations even in these more congenial circumstances, many of which are related to those brought against Williams' use of lifetime QALYs considered in Chapter 5. I raised the issue of excessive epistemic and bureaucratic demand on institutions in assessing entire lifetimes of welfare or opportunity for individuals. If we move from QALYs – which adjust life years only by reference to particular health conditions – to a more general assessment of all life experience, this problem increases enormously. I also raised the worry that in practice, such a policy might end up relying on numerical age as a heuristic, undermining the purpose of quality-adjustment. As I said, there may be more reliable general indicators of lifetime quality, such as poverty, though this would be a move from having individual lifetime priority decide one's claims, to a reliance on more general indicators that may not correlate with lifetime priority in some cases.

There are also concerns about the political and social effects of such a distributive system. At least in the UK, the presence of a national health service that assesses patients largely on the basis of need at the micro-level is of considerable social importance, being expressive of the equal regard of the state for its citizens, while public support for such important institutions may be partly dependent on their universal credentials. Even if there are good reasons of distributive justice to offer preferential access to the worse off, there may be reasons relating to other public goods, such as equal respect, to avoid such an explicit policy at the level of individual patients. On the other hand, the worst off might rightly complain that equality of consideration at one stage despite considerable inequality elsewhere is only superficially respectful of their status as citizens. A corresponding worry is that relying on patients being able to demonstrate at the individual level that they are badly off in lifetime terms in order to gain priority access to treatment can be stigmatising (see e.g. Wolff, 1998; Anderson, 1999); quizzing patients on intimate details of their lives, or even categorising them as having had bad lives, may be humiliating and degrading even if it is not intended as such.

None of these concerns speaks conclusively against some prioritarian weighting in micro-allocations and it may be that some degree of micro-level weighting according to lifetime priority is appropriate when it comes to access to ageing enhancement; but they reduce the degree to which we can implement an ideal prioritarian weighting at the micro level. In any case, such non-absolute weighting does not support the Egalitarian Objection for two reasons. First, as I argued in my discussion of Williams, it does not consider numerical age as such as a reasonable ground for rationing, even as a proxy for other goods. Second, even if there were a strong link between age and lifetime priority, the system considered here does not rule out interventions that predominantly benefit the better off although it may, as I discuss in Section 6.3.2, reduce the priority of state involvement in such interventions.

Even if we cannot successfully apply prioritarian weighting at the micro-level, due to a combination of practical constraints and competing normative concerns, an alternative way to include a concern for lifetime priority is in weighted macro-allocations between different groups. Here, we are not only deciding whom within a patient group should have (priority) access to ageing enhancement, but how far up or down our list of priorities ageing enhancement should come, depending on the likely profile of its beneficiaries. If we must rely on general characteristics such as poverty due to epistemic constraints, perhaps it is best to apply that reliance at a level of greater generality i.e. the population level.

When we are deciding how to allocate funds across the entirety of our healthcare budget, giving some weight to proportionality suggests that we ought to give what might otherwise appear to be a disproportionate level of resources to conditions that predominantly affect the worse off, or to target funding at health initiatives for groups who are less well off in lifetime terms, or in geographic areas containing those groups. This allows some considerable role for lifetime priority, without that 'swamping' the role of time-relative sufficiency as an absolute tiebreak would, and without explicitly picking out particular individuals for lower priority. Even if some micro-allocations such as additional criteria for waiting lists could be framed in such a way to avoid this problem, by virtue of not targeting identifiable individuals, a focus on macro-allocations seems at least a plausible minimal role for lifetime priority. Treatments that will predominantly benefit the best off in lifetime terms are a lower research and funding priority than they would be if considered solely on the basis of the number of lives saved, QALYs added to a population, or some other consideration of priority.[57]

So I have rejected the use of lifetime priority as a tiebreaker at least in cases of irremediable insufficiency by reference to the idea of rescue, but suggested that in such cases lifetime priority should play a weighting function, at least at the macro level, but also possibly at the micro level in some cases. Section 6.3.1 considers some concerns about appealing to the idea of rescue in healthcare. Section 6.3.2 then considers how this discussion applies to ageing enhancement.

6.3.1 Rescue

The claim that rescue is special, such that cases of rescue ought not be subject to prioritarian tie-breaks, bears superficial similarity to Jonsen's 'rule of rescue', which says that "Our moral response to the imminence of death demands that we rescue the doomed" (1986: 174). A common reading of this rule is that we should invest considerable resources in saving the lives of identifiable victims who are in immediate danger. The rule has come under considerable criticism. Garrett (2015) argues that it fails to consider the broader institutional context of

[57] This is not to say that these measurements should not be used, but that however else we decide the priority of treatments, benefitting the worse off in lifetime terms is one factor that should contribute to assessment.

medical endeavours; Orr and Wolff (2014: Section 5) suggest that the rule ignores the future costs of unlimited endeavours to save lives right now, ignores harms other than death, and sacrifices unidentifiable 'statistical' deaths to empathy-laden identifiable victims; and Wilson (2012: 194) argues that the intuitive force of the rule relies on a morally arbitrary framing of the circumstances as exceptional when "getting sick and dying is the rule, not the exception". Others (e.g. Rulli and Millum, 2014; Orr and Wolff, Sections 7-8) defend restricted versions of the rule.

I agree that the rule of rescue is problematic, perhaps unsalvageably so. But even if we reject Jonsen's rule, the idea of rescue nonetheless has an important place in distributive justice. His claim that we have an *overwhelming* moral duty to save *every* identifiable victim (and *only* identifiable victims) is far stronger than the view outlined in the previous section, that we should not use lifetime priority as a tie-breaker in rescue cases. This view need not ignore statistical harm, or harms other than death, and does not insist on an overwhelming duty of rescue; so it can fit with plausible claims about broader medical obligation.

Wilson's worry, that a focus on rescue relies on treating unavoidable facts of life as special, is more challenging; the focus on irremediable insufficiency does treat circumstances that occur constantly as special in some sense. Still, this objection has force only on a particular way of understanding the term 'special', which applies to the rule of rescue but not my discussion. In one sense, death and illness are clearly not special, since they are everyday and, in lifetime terms, unavoidable. The rule of rescue invokes the responses we have when we could rescue someone *as private individuals* – which for most of us is infrequent to non-existent – and tells us to apply them at an institutional level which lacks this rarity. Since the rule of rescue treats death as if it were special in the sense of being infrequent, it tells us to pile in an apparently disproportionate level of resources to rescue; but given the actual contexts of institutional medical decisions, this simply moves the problem to other places.

However, there is another sense in which death and severe illness are special, despite being frequent. They are special because they are among the lowest points in our lives, and because they are often (always in the case of death) not remediable. This form of specialness need not compel us to do everything possible to avert them, especially given their ubiquity. But it can compel us to treat these states distinctly in our scheme of distributive justice. So my appeal to rescue is not vulnerable to the compelling concerns raised against the rule of rescue.

Relying as it does on time-relative sufficientarianism, my appeal to rescue also looks beyond an undue concern with the present. This means that it can extend to ageing enhancement; although the effects of physical ageing are slow and cumulative, and so hardly constitute an emergency, and ageing enhancement would be most effective if it were implemented long before someone was at immediate risk of increased death due to senescence, ageing enhancement is still an intervention aimed at avoiding irremediable insufficiency, even if that decline will not occur

immediately if ageing enhancement is refused. Although we could postpone ageing enhancement, in the sense that nobody will die immediately if we deny them the intervention, there is nothing that can ultimately rescue us from the declines and increased risk of death caused by physical ageing *except* some form of ageing enhancement. An intervention can constitute rescue because it is the only plausible intervention against an irremediable insufficiency, whilst still being in a sense postponable. So ageing enhancement does plausibly constitute rescue, and an appeal to rescue need not be subject to the reasonable objections that have been raised against Jonsen's demanding rule.[58]

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[58] One might worry that this position faces a problem equivalent to that which troubled Daniels with regard to SDH. SDH affect life expectancy and health not only for the very worst off but at all levels of social status; Marmot (2005: 275-6) suggests that "as you move from the top income down to the $30,000-50,000 range, mortality is multiplied about 1.6 times". This effect operates at a group level (33-35), so that changing a group's level of SDH may have no effect on the health of some individuals in that group. But since such group differences are comprised of individual differences, we can still make generalised predictions that redistribution on a broad scale will decrease some well off individuals' life expectancy.

If a change in SDH reduces life expectancy, a refusal to do so could count as rescue, since it would avoid an irremediable insufficiency at a particular time. An example will show how problematic this is for egalitarians: we institute a progressive tax that redistributes wealth from the best off to the worst off. The worst off have a claim to that transfer insofar as they are below the sufficiency level, and have had worse lives overall. But now one of those better off individuals argues that he too has a claim *against* the transfer on the basis of time-relative sufficiency, because a significant change in his group's income may affect his life expectancy. Since it is related to life-expectancy, he can claim it is an *irremediable* insufficiency; reversing the decision could 'rescue' him in the sense of delaying his death. So his claim to keep his money on those grounds competes on an equal footing with the claim of the worse off individuals. The obvious way to respond to this case would be to note that although both individuals are faced with an irremediable insufficiency at some point, the fact that one of them has had a significantly worse life automatically decides between them. But if we reject using lifetime considerations as a tie-breaker in cases of irremediable insufficiency, this option is not available.

There is something wrong with this; even if reducing the wealthy person's wealth will affect her life expectancy, the gains to the worst off obviously take precedence, given their current position. The challenge is to explain the difference between this kind of case and rescue cases involving healthcare discussed above. One explanation is that there are limits on the effects the state should consider when forming policy. While these limits do not distinguish SDH from healthcare in the neat way Daniels assumes, they may distinguish the effects that changes in SDH have *on the better off* from the effects of healthcare interventions on the same group.

Marmot suggests that redistributing SDH such as wealth harms the best off partly because it undermines their higher status, increasing their levels of long-term stress, which in turn damages health. In turn, it will benefit the worse off, both directly by impacting their basic material conditions, but also by improving

6.3.2 Implications for ageing enhancement

The Egalitarian Objection insists that the state should not research or implement – and perhaps should even ban – ageing enhancement because the necessary resources could instead fund healthcare interventions for younger patients. The above proposal does not support the Egalitarian Objection; it suggests a more limited, though still considerable, role for lifetime prioritarian concerns, which should be tempered by a recognition that elderly patients are not always among the best off in lifetime terms, and that the lifetime well off have claims on the grounds of time-relative sufficiency.

However, if it is feasible to introduce lifetime prioritarian considerations at the micro-level (e.g. in terms of placing prospective patients on a waiting list) this implies that if states invest in research on ageing enhancement, it should be with a view to prioritising access for the worst off. If such micro-level interventions are not feasible, proportionality at least implies that if ageing enhancement will likely be unavailable to all but the wealthiest due to cost, it should be a considerably lower spending priority at the macro level; in principle, given resource constraints, potentially low enough not to qualify for state funding at all. On the other hand, state support for technologies that will initially only be available to the wealthy may be acceptable if we can reasonably predict that those technologies will become more widely available as costs come down, and that such investment is necessary to get them going in the first place. If there is promise of such a 'trickle down' effect, then it becomes relevant to the ethical situation that there is a "considerable burden of age-associated diseases" (Sethe and Magalhães, 2012: 181) in developing countries, and that many of the worst off in all countries suffer from ageing.

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their relative status, reducing long-term stress (104-137). Both cases thus involve changes in status having some effect on health. But there is a significant moral difference between these cases. The state is obligated to address individuals' low status due to its impact on health, but also because even if some status disparity is inevitable people have a right to participate as (roughly) equals within their social context. That is, there is an additional moral impetus behind addressing the social standing of those who have low social status.

But there is no such moral impetus to protect the high status of the better off, particularly when that relative position depends on maintaining others' lower positions, because there are *independent* moral reasons against maintaining significant status differences among individuals. To make a loose comparison: the distress of racists, even if it affects their health, is no reason to avoid trying to end slavery. Similarly, because we have strong moral reasons to resist stigmatising differences in status, the psychological effects of 'lowering' a person of high status to be more on a level with others gives us no reason to resist that change (though it might give us reason to help them in other ways). This is not to insist on a return to the strong distinction between SDH and healthcare at all levels – for the worse off, a lack of SDH has a direct effect on health due to material deprivation – but to note that they operate in different ways, with different morally import, at least among the better off. This means that even if we think lifetime priority should not automatically break ties, we need not oppose progressive redistribution of other social goods.

These factors are hard to predict, although some have tried. Ehni (2012: 229) suggests that, due to the complexity and heterogeneity of ageing, enhancement will have to be personalised at great cost, reducing its propensity to reduce in price, while Capitaine and Pennings (2012: 257) insist that because ageing enhancement will likely require multiple different interventions, "even if each...became cheaper over time, the 'whole package' would probably still not be affordable" either for many individuals or widespread state funding.

Others claim ageing enhancement will eventually become widely accessible. Buchanan (2011: 50-51) argues that because of the increased gains in productivity from enhancement of all kinds, states will be motivated to "impose some limits on inequalities in the distribution of these enhancements by ensuring that all have access to some 'basic' level of them".[59] However, governments in modern democracies are also motivated by short-term expenditure. If ageing enhancement would be prohibitively expensive on a national level, governments might suppose that they are already providing a 'basic' level in the form of current healthcare services.

Perhaps costs will come down due to economic pressures. Sethe and de Magalhães (2012: 181) claim that high demand for ageing enhancement would drive competition among pharmaceutical companies which, combined with mass production, could bring down costs. But Balasegaram (2014) argues that pharmaceutical companies can often maximise profit by keeping prices high amongst a narrower market rather than pursuing lower prices and broader accessibility. She also argues that a reliance on technologies being opened up by economic competition is stymied by practices such as 'evergreening', where companies "have patents granted on even minor modifications on existing drugs".

Alternatively, some proponents claim ageing enhancement will in fact lead to net savings, because it will tackle the underlying cause of a host of age-related diseases, each of which incur significant costs currently (Olshansky et al, 2006: 31; Mackey, 2003: 194; Farrelley, 2010). Relatedly, Harris (2002: 25) suggests that radical ageing enhancement would delay the onset of age-related health problems; treating them later in the future might be economically efficient because economic growth will drive down costs in real terms. Capitaine and Pennings disagree, claiming that net savings arguments must assume that ageing enhancement will not extend the frailspan (i.e. the length of time we spend in poor health at the end of our life) proportionately with lifespan, but that we cannot know that this will happen; they also respond to Harris by noting that we cannot assume that healthcare costs will not go up in real terms. More worryingly, they claim that ageing enhancement would actually *increase* healthcare costs, because the main driver of such costs is technology and ageing enhancement will require lifelong use of intensive technology. Even if the ultimate savings in delayed illness outweigh the additional costs of enhancement, we may be unable to afford the initial lump investment required to implement ageing enhancement at a population level.

[59] See also Olshansky et al (2006: 31).

If both pessimistic and optimistic predictions are feasible (which Capitaine and Pennings do not dispute), this does not undermine the case for research into ageing enhancement, though our prioritisation of such research may depend on whom we think more likely to be right. But Capitaine and Pennings are right to insist that there are a number of uncertain assumptions underlying the economic case for widely accessible ageing enhancement; this may reduce the sense that enhancement "should become one of our highest priorities" (Olshansky et al, 2006), because this claim is based on the economic and health gains of very wide access bringing down healthcare costs considerably. So while concerns about inequity do not suffice to undermine the idea that the state should invest in research on ageing enhancement, the plausibility of arguments suggesting that it may not be affordable for the state or many individuals may lessen its priority in public research terms; if those worries come to fruition following successful research, the state will have reason to downgrade the implementation of ageing enhancement as a spending priority.

This introduces a further question about whether the state should allow such developments in a private capacity if they are judged to be unaffordable or inequitable for the public purse. Strict equalitarians might claim some grounds to ban even private research and use of ageing enhancement if it is not accessible to all. This would depend on the strong version of the Egalitarian Objection that I rejected in Chapters 4 and 5; a failure to benefit everyone does not mean we should benefit nobody, or prevent people from acquiring benefits privately. This is particularly plausible with regard to private investment; unlike egalitarian concerns about the use of public funds, we have *prima facie* commitments to allowing people to do what they want with their money.

Sethe and de Magalhães (181) suggest that any egalitarian objections to ageing enhancement would impugn a vast range of ordinary practices where money we spend could instead be spent on healthcare for the worst off, and suggest that it is inconsistent to focus on ageing enhancement in this regard. Of course, one might insist that many of our ordinary practices are indeed impugned by this reasoning, and that our failure to do the right thing so far does not sanction continued failure. But their objection is one of priority; why on earth should we oppose life-extending interventions on the grounds that the (privately owned) resources could go towards treating conditions of the worst off, when we don't make the same complaint about a host of other, less morally pressing spending decisions? As my commitment to the importance of time-relative sufficiency should suggest, I have sympathy with this line of thinking. While there is a morally pressing case for spending considerably more – including state-backed coercive measures to release more privately owned wealth – on the worse off, there are plenty of places to source this additional spending.

This might point us towards a libertarian policy; while the state is entitled to take control of some private wealth for distributive purposes, the remainder should be entirely at the discretion

of owners, including private healthcare. The problem with this is that private spending on healthcare is not *merely* a failure by individuals to benefit others, but in fact at the collective level has harmful consequences that the state ought to regulate. The most striking of these is that described above by Balasegaram; significant demand from wealthy consumers distorts the international pharmaceutical market, moving research and investment away from conditions that disproportionately affect the worse off. Additionally, increased expenditure on private healthcare within individual states may draw expertise from public healthcare (see e.g. Dean, 2015).

Again, such prioritarian concerns do not warrant a ban on private ageing enhancement. But they might justify some coercive or motivating intervention by the state in the pharmaceutical market. There are various options here. On the motivational side, states could financially incentivise pharmaceutical companies to invest more in treatments for otherwise non-lucrative conditions e.g. through subsidies, tax breaks etc. While allowing pharmaceutical companies fairly free reign in their development, states could set up a distinct fund for making ageing enhancement more accessible, or for promoting other interventions that will benefit the worse off (an international version of this proposal exists in the Health Impact Fund). The fund could be financed by private donors and/or by increased taxation on an egalitarian justification. This avoids overt government control of industry, and recognises the potential benefit for the worse off from ageing enhancement, rather than simply giving up because, left unchecked, enhancement will likely be inegalitarian.

Alternatively states might enter partnerships with pharmaceutical companies on the understanding that although much access would be private, some subsidisation might exist for the worse off; prioritarian weighting might thus have to decide whether such a deal was worth it depending on how much the state committed, and how much subsidisation pharmaceutical companies would give. The state might also offer to invest in research on the assumption that costs would eventually come down, making enhancement more widely affordable. Again, prioritarian weighting would determine whether this constituted a good deal.

On the coercive side, we might consider a direct levy on production of and access to ageing enhancement. This may seem to fall foul of the earlier complaint that many other activities are much more obvious targets for prioritarian complaints. As I have said, I agree with the thrust of this objection, but there are two considerations that point the other way. First, there is an issue of political feasibility. Endless increases in taxation on income are politically hard to motivate, and a levy on access to a particular, new technology is simpler both because people have no settled idea about how much novel technologies should cost, and because such a levy can be integrated into the price; this is psychologically different from income tax, which is explicitly taken from the individual by the state, and taken from money that one has earned. Second, if private healthcare spending causes harm by distorting the pharmaceutical market, then it is

different in at least one way from other forms of spending in directly influencing the problem we are trying to solve. These thoughts are not conclusive, but the existence of other morally dubious spending decisions need not necessarily undermine a focus on ageing enhancement.

A second concern with the strong libertarian position that people should be able to spend their money as they wish, including on private access to ageing enhancement, is that it ignores the fact that in many cases different levels of wealth, and the different opportunities to which they buy access, result from injustice. A purely libertarian policy, then, must at least be constrained by an account of how we ought to respond to injustice; this is the subject of Section 6.4.

6.4 Responding to injustice

It would be a deeply incomplete discussion of distributive justice that contained no consideration of injustice, and whether and how healthcare allocations should respond to it, if at all. We often fail to fulfil claims of justice, distributive or otherwise. Many also argue that social injustice is pervasive in our social structures, and that the best off in society do well because we have benefitted from and inherited unjust inclusion according to social categories such as race, class and gender, while many of the worst off do badly because of unjust exclusion along the same lines, and the inheritance of poverty and lack of opportunity. As well as these inherited benefits, members of privileged groups often benefit from current discrimination, and are said to be complicit in maintaining[60] unjust social structures through our participation in and support of systems of unjust privilege from which we benefit (see e.g. McIntosh, 1998; Jensen, 2002; Bonilla-Silva, 2003; Feagin, 2006; Applebaum, 2010a, 2010b; DiAngelo, 2010). Kolers argues that even if few of us can be identified as "perpetrators" of structural injustice, "most everyone *perpetuates*" it (2014: 423). According to this view many among the best off are not innocent in terms of systemic injustice, because we benefit from and recreate it.

There are also considerable differences in health-status, and specifically life-expectancy, between different countries and regions, and the maintenance of unjust practices seems implicated in these differences. For instance, our own successful healthcare system depends in large part on a 'brain drain' from developing countries (see e.g. Mensah et al, 2005; Serour, 2009), which depends on the significant differences in wealth and opportunity between these regions. As Pogge (e.g. 2010) has it, citizens of developed democracies are partly responsible for the actions of their governments in upholding an international system that works to their favour at the cost of those living in developing countries.

If such discussions are right then this has considerable implications for how we should think about ageing enhancement (among many other things). In such cases, those of us who are responsible for or even just passively benefit from structural injustice may bear a special kind of

[60] Although Butt (2014) suggests that it may be sufficient that we benefit from injustice to incur obligations to rectify it.

responsibility or culpability that affects our claims on the basis of purely distributive justice. In particular, even if we reject the use of lifetime priority as an absolute tiebreaker in individual cases, it may be more plausible to grant absolute priority to people who have had worse lives overall *because of* injustice; not because they have had worse lives, but because the better off individuals with whom they compete are culpable with regard to the systemic biases.

Segall (2013: 193-206) rejects the idea of prioritising victims of social injustice, insisting that there is no coherent difference to be drawn between social and natural disadvantage. Segall's example of social injustice is the case of a person who is in need of healthcare because of racism; but his conception of racism focuses on discrete acts performed by socially isolated individuals (e.g. a racist attack, or an unfair policy imposed by racist individuals). On this view, it seems natural enough for the rest of us to declare ourselves not responsible for racial injustice. But the view I am considering sees this as an incomplete account of social injustice. If most well off individuals are complicit in maintaining systemic injustice, or at least benefitting from it, we are culpable for social injustice in a way that we are not culpable for natural disadvantage.[61] At the very least, this suggests that there is an additional moral dimension to competition for scarce resources between victims and beneficiaries of systemic injustice, where their respective status gives us reason to prefer the former.[62]

Overall (2005: 200-205; 2009: 337-338) offers the most explicit discussion of the relationship between reparative justice and ageing enhancement, insisting that we must give priority in access to enhancement to victims of systemic injustice, at the cost of beneficiaries (indeed, she cites such a role as a strong reason in favour of developing ageing enhancement). Regarding healthcare in general, Jones (1985) suggests that we should prioritise certain forms of medical treatment for victims of injustice when they compete directly with those who are culpable for injustice (389), in the same way as we ought to implement affirmative action with regard to other social goods. He argues that apparently fair allocations lose their veneer of impartiality when we consider the fact that some people have "illicitly enjoyed...benefits at the expense" of others. Treating individuals as if they were in an equal position in this case is discriminatory, since it fails to consider the morally relevant origin of their situation (392). Similarly, one might argue that a system that weights individual claims on the basis of lifetime priority misses something of considerable moral importance if the better off individual is partly culpable for this disparity.

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[61] Things are obviously complicated by the fact that victims of natural bad luck are often victims of discrimination.

[62] It is important to note that this is not a *retributive* justification. The thought is not that those who uphold unjust structures deserve to be denied healthcare as punishment; it is that if one competitor for a good has that need partly due to the culpable behaviour of the other competitor, it is fair to insist that the unavoidable burden fall on the latter.

The simplest relevant justification for affirmative action outside the context of healthcare is as a corrective to current barriers. For instance, people with names that are stereotypically non-white are less likely to be selected for job interviews despite identical CVs (see e.g. Bertrand and Mullainathan, 2004; Wood et al, 2009). In this case, showing a preference at one point corrects an imbalance elsewhere. The parallel is inequality of access to healthcare, either because of social advantage or (perhaps unconscious) prejudice from those who control access (see e.g. Blanchard and Lurie, 2004; Green et al, 2007). An allocation that depends purely on apparently random allocation processes, or even on the judgements of medical staff, will systematically disadvantage some patients. The ideal response to this issue is to eliminate unjust biases. But this is unlikely to happen completely, and so we also need corrective responses; moreover, those who have already suffered health disadvantages due to discrimination have claims of reparation.

A second justification for affirmative action is correction for past injustice by ameliorating its present effects. Jones argues that the greater incidence of poor health among black Americans is partly due to inherited as well as present racial injustice. Overall makes a similar suggestion, although where Jones appeals fundamentally to a direct effect on health to justify reparative justice in that area, Overall thinks it sufficient that individuals have suffered *in any way* from injustice; ageing enhancement is then a way to offer additional life to those who have lost various important opportunities due to injustice, not just those who suffer health burdens.[63]

If we ought to show preference to victims of social injustice when they compete with beneficiaries, how should that translate into policy? As with broader distributive concerns, the use of macro allocations could involve allocating funding in an apparently disproportionate way to conditions that affect victims of injustice, or to targeted health programmes. If members of a group that suffers from systemic injustice die disproportionately before they have reached old age, this would again place ageing enhancement lower in our priorities, although it would not eliminate it altogether since, as Overall notes, many victims do reach old age, and might benefit somewhat from enhancement.

There may also be greater justification for implementing additional weighting in micro-allocations. I argued in Section 6.3 that because patients who have had better lives overall have a distinct claim based on time-relative insufficiency, we cannot use lifetime priority as an automatic tie-breaker. However, it is plausible that certain kinds of culpability might override this claim. For instance, Jones considers the possibility of a screening system for organ transplants where those who have culpably benefitted from racism are given lower priority

[63] We might generally prefer to correct injustice using the good that victims were denied, since that is more respectful of individuals' preferences and aims. But it would be inappropriate to, say, offer a job to a frail elderly person who was unjustly denied one many years ago; and if her health is threatened, health interventions may be the only appropriate form of compensation. So Overall is right not to suppose that justification for preferential treatment in healthcare necessarily requires that victims' health was affected.

when competing with victims. His "paradigm case" is "an affluent southern [i.e. the ex-Confederate states of the USA] white patient who has profited from and... endeavoured to perpetuate the repression of blacks" (389). Jones suggests a quota system based on the higher incidences of relevant medical conditions among American blacks. In principle, if the arguments considered earlier are correct, the scope of this competition might be significantly wider than such clear, paradigm cases.

This still restricts the scope of those who bear the burdens of reparation to those who compete directly with victims of injustice in immediate allocations. But if we broaden our justification for priority from particular health disadvantages to *all* unjust disadvantages, as Overall does, we might abandon this restriction. If an individual is culpable for systemic injustice, why not insist that they should be given absolutely lower priority than all victims? Neither Jones nor Overall makes this suggestion, but it is worth considering briefly. Each victim of injustice might be seen as having a claim to preference over patients who are culpable for their unjust harm. Since ageing enhancement could in principle benefit everyone, beneficiaries of injustice would be in competition with all victims of injustice, ruling them out of treatment in practice, if not in principle.

However, Jones and Overall are right to limit their discussion to a proportional weighting rather than a *de facto* exclusion of beneficiaries of injustice. First, while the broad culpability thesis suggests that beneficiaries of injustice are culpable for the harm caused to victims, each individual may only be weakly culpable for harm to any individual victim. No individual beneficiary's behaviour sustains systemic injustice or unjust institutions. This is not to deny that our behaviour jointly sustains systemic injustice. But if we are considering pair-wise comparisons, it seems plausible that the degree of compensation an individual should be expected to bear should depend on their contribution to the harm that the compensated victim suffered. If it is true that we contribute to that harm, we do bear some culpability, sufficient to justify giving us a lower priority or weighting in an overall distribution scheme; but since we are only partly responsible, this is not sufficient to justify *de facto* exclusion.

Second, the fact that compensation and redress are due does not mean that preferential treatment must be shown in every conceivable distributive setting. This ties in with a common criticism of mainstream affirmative action: that those who lose out are punished disproportionately to their responsibility (see e.g. Kershnar, 1997: 357) even if the broad culpability claim is true, because competitors for particular social goods are only a subset of the broader group that benefits from injustice. The thought is that even though I do benefit culpably from injustice, it is unfair to ask me to bear the full burden of correcting that injustice, because I am a minority among beneficiaries. This is particularly pressing when it comes to healthcare, where those who would lose out from direct competition would do so when they are among the most vulnerable, in a time-relative sense, of those who benefit from injustice. So if

we can compensate victims in a way that does not immediately threaten the most vulnerable beneficiaries, we should. If ageing enhancement is the kind of intervention that is most effective over the course of a lifetime, this suggests that most patients could be compensated by preferential treatment in other areas, because the point at which they would benefit most from ageing enhancement would be a stage of their life when they could benefit from other forms of affirmative action. That may still justify some priority access to healthcare – especially if we recall worries about disparity of access mentioned above – but that could plausibly be offered in terms of quotas, shorter waiting times for treatments, and so on, rather than *de facto* exclusion of beneficiaries of injustice. As Overall points out, this line of thought does not apply to victims who are very ill, for whom preferential access to medical treatment is the only possible compensation. Although advocates such as de Grey insist that ageing enhancement will be most effective if applied across the lifetime, it may have some effect even if applied only in old age itself; if so, there is justification in principle for an absolute preference for victims of injustice who will otherwise forego the compensation they are due.[64]

Finally, when prioritisation ends up meaning that the individual whose claim is granted lower priority misses out on treatment entirely, it is typically because of a lack of resources which rules out responding to all claims; prioritisation is unnecessary but for scarcity. This involves a policy of micro-allocation (preferring individual victims of injustice over individual beneficiaries of injustice) within the context of macro allocations that set the healthcare budget, and the budget for a particular intervention within that. Our concern with ensuring that victims of injustice get priority access to treatment when no other compensation is feasible may well support this policy within a particular macro allocation. But we should also be concerned with ensuring that the cost of that compensation is spread fairly among those who are bound to pay it.

Miller (2007: 83-109) suggests two principles of fair allocation of burdens for rectifying injustice: the ability to bear costs, and the degree of responsibility for or level of benefit from injustice. Those beneficiaries who are vulnerable because of illness and old age are among the least appropriate (within the group of beneficiaries of injustice) to bear responsibility according to the former criterion, even if they still fulfil the latter. The principles of distributive justice outlined in Chapters 3-5 and the beginning of this chapter suggest that when those who have benefitted from injustice can be divided into individuals who would be brought below a sufficientarian threshold by the burden of reparation, and those who would not, it is preferable

[64] This presumably applies to other medical interventions where absolute preference would not lead to inefficiency or waste; although I am unsure whether the scope of competitors is limited to the kinds of extremely clear cases of perpetrating injustice that Jones suggests, or whether it is feasible to broaden the scope to the more unwitting maintenance and benefit discussed above. There are clear political barriers to implementing a more comprehensive system, which may be practically insurmountable. There are also considerable complications from the fact that beneficiaries of one injustice may be victims of others.

that the latter group should bear the burden. So while it is true that within a particular budget reparative claims may lean us toward showing preference to victims of injustice when they compete with culpable beneficiaries, where feasible we ought to prefer expanding access at the cost (via taxation) of culpable beneficiaries who are more able to bear the burden of responsibility. Of course, public opinion and economic constraints mean that we will not be able to increase taxation so much that we can treat everybody. But we must consider the broader framework of 'scarcity' that shapes reparative trade-offs.

6.5 Summary

I began this chapter by considering a way of deriving the Egalitarian Objection from distributive principles I have endorsed, by using lifetime priority as a tie-breaker in cases of equal time-relative insufficiency. This position relies on the idea of turn taking, which I argued is inappropriate in circumstances where we must decide between individuals who will fall irremediably below a sufficiency threshold if they lose out in a distributive decision. Such cases should be isolated to some degree from broader distributive concerns. I then considered an initial justification for this isolation in the form of Daniels' theory that healthcare is special, but followed Wilson in rejecting this as unable to accommodate social determinants of health. I offered my own view that conceives of such cases as instances of rescue.

As such, I suggest that we are not justified in denying ageing enhancement to elderly people on distributive egalitarian grounds. Even though it is true that many of those who would benefit from ageing enhancement are among the better off in lifetime terms, it is not their age as such that determines this; moreover, ageing enhancement will prevent the better off from dropping irremediably below a sufficiency threshold at particular times. The foregoing argument suggests that in such cases, claims to time-relative sufficiency must be included in our concerns, so we cannot use lifetime priority as an automatic tie-breaker in such cases. However, I suggested that lifetime priority may play a role in weighted chances in determining priority for treatments that require waiting lists, and certainly should play a role in our broader distributive decisions; so the Egalitarian Objection does have some force, since it tells us that insofar as ageing enhancement will disproportionately benefit the lifetime best off, it should form a lower spending priority than claims about the number of lives or life-years saved might suggest.

I also suggested that we must supplement this view with a theory of how to respond to injustice. I considered a position that lays considerable responsibility for various systemic injustices at the feet of those who benefit from them and maintain them through inaction and replication. If this is right, it should inform how we allocate various social goods, including healthcare. However, I suggested that even if in cases of unavoidable conflict we may be justified in preferring victims of injustice over perpetrators, there are often more appropriate compensation methods, while broader considerations of justice, including time-relative

sufficientarianism, tell us to look first to expanding access to the goods of competition at the cost of those beneficiaries of injustice who are best off in a time-relative sense.

That ends my discussion of the Egalitarian Objection. I have argued that it does not constitute a compelling reason for states to avoid investing in ageing enhancement *per se*, but that it has implications for the level of priority that ageing enhancement should take in our all-things-considered decisions, depending on issues of accessibility. However, these implications do not derive from a focus on age as such, but on particular issues with privilege-based access. I have also suggested some ways that we might move to moderate some of those egalitarian concerns, making ageing enhancement more ethically acceptable. The following, final two chapters address the third broad concern about ageing enhancement: the Overpopulation Objection.

Chapter 7: The Overpopulation Objection – Constraining reproduction

The following two chapters consider a final objection to ageing enhancement: that it will result in morally problematic overpopulation. Section 7.1 outlines the Overpopulation Objection, and considers some initial attempts to defuse it, before turning to the most common response from proponents of ageing enhancement: that if population size genuinely is problematic, we should curb reproduction rather than reject enhancement. Some proponents write as if controlling reproduction can obviously be done in a way that is both ethically acceptable, and sufficiently effective to meet any increases cause by ageing enhancement (e.g. Bostrom, 2005: 12; Davis, 2005; Bostrom and Roache, 2007; Blackford, 2009). But in many ways these two requirements pull against one another; this chapter outlines some tensions between them. Section 7.2 introduces the idea of incentives, and suggests some ethical constraints on the kinds of incentives we can employ. Sections 7.3 and 7.3.1 consider non-financial incentives that tie access to ageing enhancement to certain reproductive behaviours, and outline some worries about them. Section 7.4 considers financial incentives in more detail, and suggests that although there are potentially acceptable ways to financially incentivise reductions in reproduction, there remain concerns about a striking a balance between efficacy and a respect for fundamental interests. However, Section 7.5 argues that similar concerns threaten the view that we ought to avoid ageing enhancement. Chapter 8 then considers an alternative approach, which focuses on consumption.

The argument from the Overpopulation Objection is roughly this:[65]

> **P9** There is some threshold T below which it is of particular moral importance that people do not fall.
>
> **P10** If an act A will lead to T being unachievable for some number[66] of people, and there is no morally permissible way to mitigate this effect, there are strong moral reasons not to pursue (or, more strongly, to restrict) A, so long as not pursuing A would avoid this outcome.
>
> **P11** Ageing enhancement risks[67] raising the total population to a level that cannot sustain T without intervention elsewhere.

[65] The Overpopulation Objection is raised by, among others, Hackler (2004: 194); Pijenberg and Leget (2007); and Temkin (2008: 206). None of them present it as a formal argument, so again I present what I take to be the strongest version.

[66] It is unclear precisely how we should quantify this. Is bringing one person below T sufficient to render an act impermissible? Since overpopulation will harm many people, I will ignore this complication.

[67] I discuss the issue of risk in Section 8.4.

P12 No such feasible intervention is morally permissible, and not pursuing ageing enhancement will avoid unsustainable population levels.

C2 There are strong moral reasons for governments not to support (or more strongly, to restrict) ageing enhancement.

As should be clear from Chapter 4, I accept P9 if it is read as a sufficientarian statement. P10 also seems plausible, although I will suggest in Section 7.5 that its last clause – that the argument applies only if a failure to pursue A would *avoid* the relevant harms – causes problems for the latter part of P12, and hence the argument's conclusion. The bulk of this chapter considers a common response from proponents of ageing enhancement, which is to reject the first part of P12 by appeal to regulation of reproduction. If reproductive restrictions are justifiable, and can avoid overpopulation even given ageing enhancement, the objection fails.

One issue I do not address is the putative obligation to consider the claims of non-existent individuals to be born. Although I will not defend this position, I deny any such obligation; I assume we are obligated only to consider interests that are either actual when we decide, or which will be actual after we act. Interests that remain merely possible before and after our act are morally irrelevant.[68] If I am wrong then we must add the interests of possible people to the considerations against reproductive controls outlined in this chapter. But unless we are prepared to alter our current practices considerably, our moral obligations to bring people into existence cannot be very strong; as far as common-sense morality is concerned, their moral impetus can be outweighed by even very weak preferences not to have children. Absent any argument to the contrary, I assume avoiding death and senescence is also sufficiently weighty to counter any such obligation.

7.1 Denying P11

This section considers some initial attempts to neutralise the objection by rejecting P11. Ageing enhancement could contribute to population growth in two ways. The first is not specific to enhancement. Any reduction in a population's mortality rate, absent a corresponding drop in the birth rate, will increase the population; and one goal of ageing enhancement is to reduce or at least delay deaths caused by ageing. The second way is more specific. Ageing enhancement could extend our retention of physical capacities, including reproductive capacities (although this is likely restricted to radical ageing enhancement). So ageing enhancement might allow

[68] Narveson (1976) defends this asymmetry, and critics include McMahan (2009) and Persson (2009). My own view follows Roberts (2011), who claims that even if possible people are in some sense worse off for not existing, our obligations in a world *w* should only apply to people who exist at some time in *w*. If future people will in fact come into existence in the real world, then we have various obligations towards them. But if they will not come into existence in the real world, we have not failed any obligation towards them.

individuals to have children for a longer period, and hence a greater total number, also contributing to overpopulation.

One might reject P11 on the grounds that only moderate ageing enhancement is feasible, and moderate enhancements will not extend reproductive capacity sufficiently to increase population significantly. This seems like a plausible response in some ways. Some worries about overpopulation seem to envisage recipients living forever; if this is unlikely, overpopulation is at least a less significant concern than such pictures assume. However, there are a couple of caveats to this response. First, I have elected not to simply dismiss the possibility of more radical ageing enhancement, so I will consider problems that could arise from this eventuality as well. Second, many people who are concerned by overpopulation suggest the planet is *already* overpopulated; even if modest ageing enhancement will not lead to a population explosion, it might still hinder attempts to reduce population numbers, or even slow growth.

Some deny that even radical ageing enhancement will be problematic. Goldstein and Schlag (1999) argue that radical enhancement will not lead to overpopulation, because our reproductive choices will also change. They note two ways we might alter our reproductive habits given extended fertility. With 'Telescoping' we would reproduce in our twenties and thirties followed by a much longer post-reproductive period.[69] 'Stretching' would involve proportional delays in reproduction (e.g. if lifespans doubled, so would the average age at which we reproduce). Goldstein and Schlag demonstrate that significant population growth will result from Telescoping, but not Stretching. They also claim we have reason to expect Stretching. But the reasons offered for this latter claim are unconvincing. They note that extending longevity in various non-human animals has produced corresponding increases in reproductive age, and mention various evolutionary theories connecting the two (743-745), while claiming that "delayed child-bearing is a rational response to longer life spans" (745). But as they acknowledge, human reproduction depends only partly on such influences. Even if ageing enhancement did trigger a biological delaying impulse, and was economically rational, that gives us little predictive power. Finally, they also note demographic evidence correlating lifespan with average reproductive age (745-746) and expect this to continue if we extend fertility at the same rate as longevity. But correlations between longer lives and reproductive ages that occur for increases of a few years may not replicate when increases are significantly larger, since such motivations may be only weakly salient for most people when they are temporally distant. Although there may be some evidence for a relationship between longevity and delayed reproduction, it does not seem strong enough for us to rely on Stretching as a solution to overpopulation for all kinds of ageing enhancement. Still, their argument indicates that delaying

[69] Also possible is Telescoping+, where people space births similarly to current trends, but *continue* this spacing for a similar proportion of their lengthened life, so that they have proportionately more children. This would have a considerably greater effect on population growth.

reproduction is as important as preventing it in avoiding overpopulation. This also suggests a benchmark against which to measure alternatives: if a population control measure leads to Telescoping, it is likely to be of questionable effectiveness.

Rather than denying that ageing enhancement will significantly increase the population, one might claim that the necessary changes in behaviour will occur voluntarily. De Grey (cited in Agar, 2010: 96-98) accepts that ageing enhancement will contribute to population growth, but thinks that recipients will recognise a moral obligation not to procreate. Similarly, Bostrom (2005: 12) insists that people will have to "learn to have children later and less frequently". Call this proposal Choice. There are various ways to encourage and facilitate free choices to have fewer children, later in life. Hartmann (1995: 33) reflects a fairly broad, although not universal, consensus that "once people's physical survival is ensured and children are no longer their only source of security...population growth rates fall voluntarily". Provision of contraception; giving women control over their reproductive and sexual activity; educating women; reducing poverty: all these measures reduce national population size and, fortuitously, are aims we should have anyway. Moreover, Sedgh et al (2014: 301) conclude that as many as 40% of all global pregnancies in 2012 were "unintended",[70] suggesting that better contraception and access to reproductive control could voluntarily reduce numbers.

Still, such optimism can only take us so far. Gerland et al (2014) cast (well-publicised)[71] doubt on previous predictions that global population would peak at around nine million, instead suggesting an 80% likelihood of population levels hitting eleven million in the next century. Even if population growth will stabilise voluntarily under current conditions, the level of reproduction that is sustainable will be different under current circumstances than under ageing enhancement, since the birth rate which constitutes 'replacement' varies according to mortality rates. The central problem with Choice is that, absent some external restrictions, there is nothing to prevent most people from choosing both options; I do not share de Grey's confidence in the power of moral obligation.

An additional issue with reliance on voluntary curbing of reproduction is that, properly classified, 'overpopulation' is as much a problem in wealthy countries as the deprived countries where the patterns of reduced fertility that Hartmann and others describe occur. The term 'overpopulation' superficially implies a narrow concern with the number of people in existence. In fact, it typically covers a range of concerns, including pollution and other environmental despoiling; irremediable loss of resources; climate change; competition for public services, and private benefits such as employment; lack of space for habitation, agriculture, etc. These issues are not all related to population *numbers* to the same degree, but are also deeply linked to

[70] 38% of these ended in birth, so even perfect control over reproduction would mean a (still sizeable) drop of 15.2%.

[71] e.g. Carrington (2014); Schiermeier (2014). Although see *The Economist* (2014a) for some perspective.

consumption. When a child born in the USA has a lifetime environmental impact ninety times greater than that of a child born in Bangladesh (Murtaugh and Schlax, 2008: 18), it is perverse to claim that global overpopulation is predominantly a problem of the developing world. A comprehensive definition of overpopulation should include consumption levels, revealing developed countries as the greatest contributors. But the data on voluntary population reduction, encouraging though it is, only covers a reduction from already large to smaller families in underdeveloped countries; so it is at least an open question whether voluntary incentives will be sufficient in wealthy states.

De Grey (2004b) also suggests a moral argument: since we cannot say which of reproduction or ageing enhancement people will want to choose in the future, it is wrong to make that significant choice for them by refusing to research ageing enhancement. But this is undermined by the fact that future individuals' decisions will not only affect themselves; if everyone in the future opts for both reproduction and ageing enhancement, the generation after theirs will have no choice but to suffer the consequences. So even if we accept the idea that it is wrong to force a choice on people paternalistically, restriction of choice is justified by anticipated harm to others.

A final challenge to P11 comes from claims that we will develop ways to cope with increased populations without requiring significant behavioural changes. Caplan (2005: S72) says "Critics who worry about [ageing enhancement]... must demonstrate that human culture is not clever or flexible enough to learn how to cope with more life". More (2005) claims we will soon be able to perform technological feats such as moving significant portions of production into space, and applying nanotechnology to engage in pollution-free industry. Such arguments aim to shift the burden of proof onto proponents of the Overpopulation Objection to show that we cannot handle enhancement. But technological panaceas are also far from inevitable. Even if we could reliably predict that developments will emerge eventually, there is no guarantee they would arrive before overpopulation had taken significant toll. It is cornucopians like More and Caplan bear the burden of proof to show that there are reasonable and timely ways to mitigate serious potential problems to replace – or to buy us time until we have developed – technological cure-alls, or to present some basis for their confidence.

If ageing enhancement does risk overpopulation, the next response is to suggest that there are morally preferable ways to deal with the problem than eschewing ageing enhancement. The remainder of the chapter considers the most popular alternative to sheer optimism: reducing reproduction systematically.

7.2 Incentives and some ethical constraints

Most advocates of the reproductive solution accept that coercive methods of control (e.g. forced abortions or sterilisation) are ethically impermissible. Instead, they appeal to the idea of incentives: bonuses for refraining from having more than a set number of children; maluses on

those who exceed a set limit; or penalties for those who exceed the limit. The broader literature on population control (e.g. Callahan, 1976; Isaacs, 1995: 365-366; Tremmel, 2010) suggests several ethical constraints on incentives:

1. **Incentives should not punish children**

Even if we can justifiably impose maluses or penalties on parents, the resulting children had no role in the reproductive decision, and so should not be significantly disadvantaged because of it. Due to the danger that some parents will force the burdens of a reduction in income or financial bonuses onto children states that impose financial incentives on procreation should provide services such as free education and free social and healthcare to offset this possibility, even though this may also reduce the effectiveness of incentives. We should also avoid penalties that directly deny children basic needs, or which place them at a significant disadvantage to their peers (e.g. denying free schooling when it is available to others).

One might worry that this injunction does not fit well with our wider practices. We don't typically consider the effect on children in the calculation of punishments or fines. In the English and Welsh courts, when S is fined no steps must be taken to ensure that the money will detract from personal spending rather than spending on a dependant. When R is given a prison sentence no consideration *must* be made of how this will affect her children. While there are some examples of dependant welfare being incorporated in sentencing guidelines (e.g. the Irish Fines Act (2010)), there is no obligation to take such considerations into account in many jurisdictions; in British contexts, it is largely left to judges' discretion.[72] But this should not undermine the inclusion of this condition. First, this evidence merely highlights a flaw in current practice; greater steps should be taken to protect dependants. Second, the sums being dealt with in most fines are likely smaller than the amounts necessary for successful reproductive incentives. The latter have the capacity to induce extraordinary hardship, so we should adjust our level of care appropriately.

2. **Incentives should avoid coercion**

At the very least, incentives should not place people in a position where they reasonably feel unable to choose reproduction because the resulting penalty or malus would significantly diminish their quality of life, or where the 'bonus' offered is in fact a good without which it is very hard to get by in the relevant society, effectively making the choice a kind of extortion. Tremmel suggests a 'four-fifths rule' for financial incentives, whereby the total amount forgone by someone who breaches the limit should not be more than 20% of their total income (154-157), although it is not clear whether he means this to apply to everyone or only the worst off, for whom a greater percentage of earnings would have a significant detrimental effect (see

[72] Thanks to Andrew Crosbie and Liz Campbell.

condition 4 below). Similarly, penalties should not take forms such as physical punishment, imprisonment, or social ostracism.

3. **Incentives should respect fundamental interests**

The fundamentality of certain interests is a feature that they acquire from a public policy perspective on the idea of sufficiency outlined in Chapter 4. Even from such a subjectivist position, where what matters or has value depends fundamentally on the attitudes of individuals, institutions and states must make some assumptions about which interests to aim for at the level of social policy. Certain interests are marked for special protection by the state even when they are not universally shared because they are very widely shared; they are robust across time for those who hold them; and they are typically fundamental from an individual perspective i.e. they are seen as non-eliminable and not fully compensable components of a worthwhile life for many people.

Fundamental interests do not have absolute weight in all contests. If our fully respecting one person's fundamental interest will threaten others' fundamental interests, it is permissible to constrain the former. In such a case, the absolute protection of an individual's interests would predictably undermine our ability to protect other important interests; such a policy would essentially privilege present interests over equally important future interests. This fetishises an instance of something valuable, at the cost of ignoring what is valuable about that thing in the first place. But fundamental interests do carry special weight in conflicts of interest, and policies that compromise them should be seen as especially costly in moral terms.

Several interests involved in controlling one's own reproductive behaviour are fundamental in this sense. Reproduction and *parenthood* are strong psychological and emotional drives for many people, and some judge biological parenthood a central constituent of a worthwhile life.[73] There are also other interests involved in self-regulation of reproduction, including *bodily integrity* (understood here in Nussbaum's sense (1999: 41) of "Being able to move freely from place to place; being able to be secure against violent assault, including sexual assault, marital rape and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction") and *bodily privacy*, and individual *control* over important decisions. State-mandated restrictions on reproduction can also be distressing even if they are not forcibly coercive, and so threaten the interest in *individual welfare*. Since fundamental interests are not absolute, we cannot rule out any method of reproductive control on the grounds that they compromise one of these

[73] This is a clear example of public policy having a mandate to treat an interest as fundamental, even if it is not currently an *actual* interest for a particular individual on a subjectivist view. Since an interest in parenthood is robust and widespread, and can emerge in previously indifferent individuals, the state has strong reasons to protect reproductive capacities even in those for whom parenthood is currently not an interest.

interests, particularly since there may be no option that protects all fundamental interests for everyone; but we can say that it is a significant disadvantage.

4. **Incentives must take account of existing wealth disparities**

Any fixed penalty that could motivate the wealthiest would be impossible for the very worst off to meet, whereas any sum that did not coerce the worst off – in accordance with condition 3 – would not trouble the richest at all. I have already noted that many concerns identified under 'overpopulation' actually relate to consumption. Even within developed countries, consumption levels differ vastly; so any regressive scheme that affects the poor more than it does the wealthy is not only unfair, but is also a failure from a proper concern with overpopulation. The former complaint is particularly pertinent if ageing enhancement is accessible only to the well off, as considered in Chapter 6. It would be obviously unjust to implement reproductive controls that disproportionately restrict the worst off in order to counter the effects of a technology that only benefits the best off.

In discussing incentives, I will consider two broad types. The first type, in Section 7.3, is non-financial, and involves some kind of behavioural condition on access to ageing enhancement. The second, in Section 7.4, is financial.

7.3 Non-financial incentives

In this section, I consider an incentive that is specific to ageing enhancement: making access conditional on reproductive status. It is natural to see this as offering people a free choice between two desirable but ecologically costly activities. But this appearance of a simple rational trade-off is misleading; features of our reproductive lives mean that such conditional access to enhancement will either be ineffective or more coercive than proponents seem to suppose.

Harris (2002a: 13) suggests that we could "restrict the entitlement to reproduce for those seeking [ageing enhancement]...making reversal of the life-extending therapy a condition of procreation or excessive procreation" (see also Bostrom and Roache, 2007: 7). Call this policy Reversal. At least some conceivable methods of ageing enhancement make this problematic. If ageing enhancement could come through a single treatment, we would either have to rely on voluntary or forced reversal. The former is de Grey's Choice, with its attendant problems; the latter involves coercive invasive surgery, precisely what incentives aim to avoid.

As mentioned in the Introduction, de Grey (2004a) suggests that the most likely mechanism for ageing enhancement will be an 'engineering' approach, which involves treating the body like a degrading machine in need of continual maintenance. The need for repeated intervention is supported even by those who are sceptical about de Grey's predictions (e.g. Capitaine and Pennings; Ehni). The state could thus refuse repeated access in relevant circumstances, avoiding invasive intervention. So long as access to enhancement is controlled by the state (even if it is only available on a private basis), this is likely to be worth as much to a wealthy person as to the

least well off and so fulfils condition 4. Reversal also has no direct affect on existing children, since the cost is unavoidably borne by the individual, so it fulfils condition 1. Finally, Reversal seems to be the best of a bad selection of options with regard to choice; it does not force people to sacrifice parenthood when they don't want ageing enhancement, or vice versa.

Reversal thus has considerable appeal. But it also raises problems. First, Reversal faces tension from an argument offered by many proponents of ageing enhancement, including Harris: that it should simply be regarded as one form of health treatment among many. Harris (2004: 528-529) argues that, "so long as the life is of acceptable quality...we have a powerful, many would claim an overriding, moral imperative to save the life, because to fail to do so when we can would make us responsible for the resulting death". He also claims that because all instances of saving a life are merely delays of death, ageing enhancement and other life saving interventions are *prima facie* morally equivalent. The conjunction of these positions implies that there is nothing intrinsic to ageing enhancement that justifies our treating it differently to other life-extending techniques. I agree; although I suggested in Chapter 6 that certain plausible circumstances under which ageing enhancement would be implemented might make it a relatively lower priority than some other interventions, nothing in that argument justified such a stark difference as making ageing enhancement, but no other treatment, subject to reproductive restrictions.

So if someone who gets extra years through ageing enhancement is denied procreation, and ageing enhancement is morally equivalent to other forms of life saving, why not also deny procreation to someone who gets a kidney transplant, or heart surgery? They too contribute to population growth. Obviously one option is to accept this extension, and agree that various other life-extending interventions should be subject to restrictions on reproduction. This does lose one of the more apparently attractive options of Reversal, which is that it allowed those who did not desire ageing enhancement to procreate freely. But if we are morally obliged to put conditions on access to many other health interventions, this attractive feature is lost. That does not rule Reversal out, but it does mean that it is rather less obviously attractive than it first appeared.[74]

One might argue that even though ageing enhancement is intrinsically similar to other treatments, it is extrinsically different precisely because it is not yet available, and so does not have a place in people's secure expectations about what healthcare interventions they are entitled to. There may thus be less public opposition to restrictions on ageing enhancement than to restrictions on other life-extending interventions, and people do not currently rely on an expectation of ageing enhancement in the way that they rely on other kinds of medical developments. Simply because of the context in which it would emerge rather than any intrinsic quality, ageing enhancement would constitute a 'tipping point'. Since we are operating in a

[74] Harris is aware of these connections, and follows his suggestion with a critical discussion of "generational cleansing" i.e. denying all forms healthcare to people once they have reached a limit.

context where people accept ageing more than they do other potentially lethal illnesses, we may thus be justified in placing conditions on ageing enhancement that are not acceptable for other interventions. Potential beneficiaries of ageing enhancement are simply unfortunate that the intervention that would help them follows previous successes.

Such a response clearly faces some challenges. Proponents would also have to oppose developments in other novel life-extending interventions. And this argument is less persuasive if certain empirical claims discussed in Section 6.3 are true, namely that ageing enhancement would contribute significantly to the alleviation of age-related diseases that the public are already psychologically committed to tackling. Although Capitaine and Pennings raised doubts about this claim, they compare ageing enhancement with a baseline of a healthcare system that uses far less technology; but if the public are committed to technological solutions to a range of conditions, ageing enhancement may come out well against a baseline of ever-increasing technology targeting multiple conditions, even if it does badly against a baseline of a low-technology system.

In any case, there are more pressing reasons to worry about Reversal, even if the tipping point argument is correct and we can isolate ageing enhancement as uniquely acceptable to place reproductive conditions on. The second problem with Reversal is that although it deals well with wealth disparities, it has implications due to the biological division of labour in sexual reproduction. It is easy to view the choice presented by Reversal as one that is faced by individual agents who face a trade-off between two preferences, and are presumably supposed to make a decision about which preference is stronger. But reproduction typically involves two people. Since women carry pregnancies and give birth, and men do not, women must have control over the decision of whether a pregnancy should proceed to birth, while men lack such decisive influence. This disparity is clearly right, but leads to problems for Reversal.

In the ideal case, a couple decide that foregoing further ageing enhancement is a reasonable sacrifice for parenthood, and conceive. If they try to access ageing enhancement following this decision, they will be told they are no longer eligible, but no physical coercion is involved. They act analogously to a single rational agent: weighing collective preferences, coming to a considered decision, and acting accordingly. Yet this is not the only possible scenario. Here is another: Mark and Sunita have sex, and Sunita becomes pregnant unintentionally. Under current legal frameworks in many countries, Sunita can decide whether to carry the pregnancy to term without Mark's consent.[75] Mark may come under social pressure to take on some parental responsibilities and, depending on his income, a legal obligation to provide some financial support. Mark has no choice in this matter, although of course he had a choice whether to

[75] Of course, in other areas women are not able to decide whether to have children, for both social and economic reasons. If enhancement should be made available to the worse off, as I argued in Chapter 6, this constitutes a further concern for the rational choice assumptions that support Reversal.

undertake the risk of pregnancy in the first place. Under Reversal, though, if Sunita decides to give birth Mark loses access to ageing enhancement. Again, he has no choice in this matter. Reversal, then, does not involve only voluntary decisions by individual agents, as it first appeared. Sunita's interests in this regard may conflict with Mark's interests, without either of them being able to affect this link.[76]

Could we avoid this? We might offer Mark a veto, giving him as much chance as Sunita to decide the outcome. But this cannot work. It cannot be that both parties have a genuine veto, for the two options (abortion and birth) are diametrically opposed; vetoing one almost inevitably means the other. There may be moral and pragmatic reasons for Sunita to consider Mark's wishes when deciding whether to terminate a pregnancy. But the only way to give Mark a veto would be to countenance forced abortion. Again, this takes us well beyond the intended scope of Reversal, involving an unacceptable form of reproductive coercion.[77]

The second possibility is an 'opt-out' clause for unwilling fathers. Ideally, Sunita faces the rational choice between parenthood and ageing enhancement assumed by Reversal. Mark lacks such a choice, since his continued access to enhancement rests on Sunita's decision. An opt-out would restore this choice to Mark. If he chooses ageing enhancement, he forfeits parental access rights *and* the specific responsibility regarding ageing enhancement. Overall (2012: 40-49) rejects the idea that fathers should be able to opt out of financial responsibility for children that they do not want. While men cannot choose whether a pregnancy results in parenthood, they choose to risk pregnancy, and thus have to take responsibility for its foreseeable outcomes, including the child's welfare. However, the proposal I am considering is somewhat different. It does not absolve men of responsibility for helping to look after a child; it allows them to renounce a specific responsibility that is not directly related to the care of the child, at the cost of losing access rights.

This proposal still has problems. Practically, there is a question of what stage of pregnancy Mark should be able to opt out. Placing it after the legal abortion limit would allow Mark to change his mind after it is too late for Sunita to change hers. Since many pregnancies go undetected in the early stages, an opt-out policy must also outline Mark's status if Sunita does not realise she is pregnant until after the deadline has passed. There is also danger that such a policy could end

[76] I do not suggest that Sunita would use this unsought influence vindictively. It is right that she should choose in her own best interests. But Reversal sets things up so that her decision affects Mark significantly, and will in cases of conflict undermine his interests considerably, even if that is not what she wants.

[77] Teo (1975) suggests that giving prospective fathers a say over abortion need not involve coercion. The aim should be a joint decision, not an imposition by either individual. But Teo says that in cases of conflict "the court can decide the dispute" (342). Either Mark's input comes to nothing (if the courts refuse to sanction forced abortion, Sunita's decision is final), or this would sanction forced abortion.

up with free-riding fathers. Many single parents need all the help they can get; Reversal allows Mark to legally renounce his parental rights in order to retain access to ageing enhancement, but then retain *de facto* parenthood by offering help with childcare. This would be on an apparently voluntary basis for Sunita, so there would be no obvious legal recourse. Since mothers have no corollary way to game the system, it is unfair to allow fathers to do so, and an ineffective incentive against reproduction, at least for men.

We have seen that Reversal can only offer Mark a free choice at the cost of compromising Sunita's position considerably. The way to avoid this makes Mark's fundamental interests dependent on Sunita's choice. Aside from being unfair on Mark, a further worry is that this greater cost will increase incidences of coercion and violence against women. A pregnancy that is unwanted by the prospective father may lead to social coercion, threats, and actual violence in an attempt to avoid the unwanted burden of parenthood. Since conditional ageing enhancement places a significant cost on parenthood – effectively, earlier death and the debilitating effects of senescence – and takes it ultimately out of some men's hands, it seems likely that a system that made access to ageing enhancement conditional on not reproducing would result in greater pressure on and violence towards vulnerable women.

The justifying structure for Reversal – that it offers a free choice based on personal preference – again seems undermined in the case of vulnerable women whose partners are prepared to coerce them into abortion. Moreover, such individuals are often the least likely to have control over their own reproduction and contraception decisions. It is true that additional legal recourse might protect against such eventualities, and so they do not automatically rule out Reversal. But such considerations at least weaken the claim that halting access to ageing enhancement for those who have children is superior in terms of coercion or equal concern to other methods of population control, and so weaken Reversal's attractiveness.

7.3.1 Sterilisation

Harris (2002a: 13) also suggests that accessing ageing enhancement could be available only on the condition that the individual undergoes sterilisation. Call this policy Sterilise. Under this policy, people can procreate freely until they opt for ageing enhancement, at which point they must submit to sterilisation. Unlike reproduction, sterilisation is a choice that can entirely be made by an individual; there is also no sense in which one person's decision whether to sterilise can accidentally end up bound to another's. But Sterilise has problems of its own. It encourages individuals to have children as early as possible so they still have time for enhancement. Under Reversal, individuals are motivated to delay parenthood. Under Sterilise, individuals have reason to reproduce early so that they can experience parenthood and have time to benefit from ageing enhancement. Under Sterilise, there is no going back once you opt for ageing enhancement. This means that, at least among those who avail themselves of ageing enhancement, population growth is significantly faster under Sterilise than under Reversal, since generational gaps are

much smaller. In Goldstein and Schlag's terms, Sterilise encourages Telescoping while Reversal encourages Stretching.

We might avoid this by making Sterilise more demanding (Sterilise+), such that one may only access ageing enhancement on the condition of sterilisation and not having already had more than *n* children. If *n* is 0, this avoids the generation gap problem entirely, although it offers a significantly starker choice than either Sterilise or Reversal. However, although the mitigating effect would be less if *n* is 1 or 2, Sterilise+ might still avoid severe Telescoping at this level. While this would still not be an easy choice to make, it is less stark than insisting on childlessness. Still, Sterilise+ reinstitutes problems associated with Reversal. Now, instead of losing access to additional ageing enhancement, an unwanted pregnancy can mean losing the chance to ever access it. The problems associated with this seem no different from those outlined above, although of course the higher the value of *n*, the less likely that a single accidental pregnancy would prove to be the tipping point.

Non-financial incentives are not implausible, but they are less attractive and more complex than they initially appear. The next section considers more traditional financial incentives, outlines some problems with them, and eventually sketches a proposal that most plausibly respects the ethical ideals outlined in Section 7.2. However, Section 7.5 raises some further problems with this idea; while these are not sufficient to rule out the idea of financial incentives against certain levels of reproduction, they should at least prompt us to look elsewhere.

7.4 Financial incentives

Condition 4 says that incentives should take account of wealth disparities. A single flat rate will comprise a much larger proportion of some individuals' total wealth than of others'. Even schemes that charge a flat proportion of income are inequitable: someone with an income of £500,000 a year can afford to lose 10% of their income more readily than someone on £20,000. Reacting to this, we might look to progressive taxation schemes for inspiration for a similar fine system (call this Progressive). Progressive taxation increases proportional liability with income. In the UK there is an untaxed 'personal allowance', while any amount one earns over this is then sorted into cumulative brackets. When it comes to financial incentives, however, progressiveness is more complex; as Bayles (1980: 57) notes, financial incentives can be progressive in two senses. They may incentivise individuals roughly equally regardless of wealth, and they may avoid increasing existing disparities of wealth. For negative incentives, these pull in the same direction: larger maluses and penalties are needed for the wealthy. For positive incentives, they pull in opposite directions, since the wealthy need larger bonuses for the same level of motivation. As such, it makes sense to focus initially on negative incentives.

For each child above *n*, we might levy financial penalties of different amounts depending on earnings, also representing different percentages of earnings. The particular figure would depend on incentivising power and other concerns. This situation is complicated, as is taxation

in general, by the variety of sources of wealth, including income, monetary savings and investments. I assume that such complications can be included in a fuller account, since there are more immediate issues to consider.

Condition 1 says that incentive systems should not penalise children. One benefit of a non-financial system, such as Reversal or Sterilise, is that burdens cannot be passed to children. A significant disadvantage of financial burdens is that individuals may arrange their finances such that they suffer none of the burdens, and instead force their children to forgo certain benefits, or even necessities. There are policies that can mitigate such extreme cases. Fines can leave room for mitigation if dependants' fundamental interests are at stake. Moreover, the most extreme deprivations that could be considered by a negligent parent – refusing to spend money on food, for instance – are already illegal. Independently of population control policies, states clearly have a duty to maintain systems that monitor children's basic interests and intervene in cases of abuse. In cases where the state has created an incentive for deprivations, the state may also be obligated to enable parents to provide such basics to their children for free. States should also avoid policies that restrict access on a financial basis to services or goods that affect children's basic interests, such as the erstwhile Singaporean policy of removing large families from social housing lists (Isaacs, 1995: 363).

A second concern is that a progressive policy will leave some individuals with negligible or no incentive to limit procreation, particularly if we include an equivalent of the personal allowance for the very worst off, which seems unavoidable if we are to avoid fining people to the extent that it affects their fundamental interests or becomes coercive. This is of primary concern for theories that take the problem of population to be solely related to the number of people alive. There is some negative correlation between wealth and family size (although this relationship is complex. See, e.g. Schulz, 2005), so a policy that fails to incentivise the worst off against reproduction would fail in its central aims, according to these theories. Since my definition of overpopulation includes consumption, it would be of considerably greater benefit to prevent births of excess children to wealthier families. Nonetheless, there is still a potential issue here. There is no guarantee that those who have their children in poverty will stay in poverty, or that the children themselves will not break out of poverty. Indeed, I presume that most participants in this debate hope that this will occur. As such, it may still be problematic if families who are exempt from Progressive are also typically those that have the most children, if we also intend to bring people out of poverty, presumably increasing their consumption.

If there are income levels for which there is no amount that is both fair as a fine – because it would become coercive – and sufficiently incentivising, we might retain Progressive, but also institute positive incentives for those who fell into this lowest income bracket, so that we had a Mixed system. The worry identified above, that positive incentives must offer more to the wealthiest to be effective, does not arise here, because only the worst off are offered bonuses.

So the state might, for instance, pay the worst off for every year they remain childless and fertile. This does not face typical criticism of such schemes, that it is unjustifiably *targeted* at the worst off, since under Mixed we are also targeting all other income brackets, albeit in a different way. Still, even a bonus system may amount to coercion if it makes access to certain fundamental goods dependent on remaining childless (and so imposes significant maluses on those who fail to comply). In a society which does not successfully provide the basics for all its citizens, there are at least some people for whom any financial incentive scheme would become coercive. Perhaps the best that proponents of incentive schemes can hope for is that this number is sufficiently small to make incentive schemes effective overall.

There are still clearly undesirable aspects of Mixed. It is in general undesirable to have the state involved in setting negative sanctions on people's reproductive behaviours (although undesirable does not mean impermissible). Moreover, if both negative and positive financial incentives are sizeable – even if they do not involve access to essentials – there may still be coercive and even violent pressure on women to undergo abortion when they would not otherwise wish to. There will also be considerable resistance to the government intervening in people's reproductive lives, even at 'arm's length' through a fines system.[78]

Furthermore if, as I have argued, overpopulation (once properly considered with regard to consumption) is a problem of wealthy countries, this implies that reductions in fertility efforts should focus there, particularly if wealthy countries will be the sole beneficiaries of ageing enhancement. However, this also means there will be countervailing local pressures due to worries about underpopulation[79] and population ageing.[80] Some economists deny that these effects will arise,[81] or indeed whether effects such as economic stagnation are negative.[82] Some proponents of ageing enhancement contend that it will in fact solve national population ageing without requiring considerable population growth, since people will be able to work for considerably longer and so there will be no need to produce new generations of workers, although this relies on assumptions that people will be willing to accept considerably longer working lives than they currently have.[83] At the very least, such worries suggest that an effective

[78] There is some support in the UK for restrictions of benefits for large families; but this is primarily supported by those who are not affected.

[79] See e.g. Hüther (2008: 38) Kraemer et al (2008: 109); Manyika et al (2015: vii).

[80] Straubhaar (2008)

[81] e.g. Straubhaar (ibid); Dalgaard and Kreiner (2001); Coleman and Rowthorne (2011).

[82] e.g. The Center for the Advancement of the Steady State Economy

[83] One might suggest that people could change jobs when they became bored, or take semi-periodic retirement. But many people lack the transferable skills to change professions, while there is reasonable concern that a periodic retirement could place people at a severe competitive disadvantage so that in practice only the fairly privileged could afford to take such time out. For a parallel see Graeber (2013) and

population policy must not only balance the increases to population size that emerge from ageing enhancement on a 'one in one out' basis, but may also face countervailing pressures that an already blunt instrument such as financial incentives may not be well equipped for; so even if methods of placing controls on reproduction are permissible, we should consider alternative solutions as well. This is the subject of Chapter 8. Before that, Section 7.5 considers the implications of the above discussion for the Overpopulation Objection's conclusion.

7.5 Implications for C2

Condition 3 suggests that reproductive constraints should avoid compromising fundamental interests. As the intervening sections have suggested, some proposals to restrict reproduction threaten one or more of these interests (extreme cases such as forced abortion, which I have not even considered as a viable option, violate all of them), or are otherwise unattractive for various reasons. Certain levels of financial incentive may restrict important choices to various degrees and at extreme levels may force an unpalatable choice between parenthood and personal welfare. I suggested that there might be some way to avoid the violation of fundamental interests, by appealing to the idea of a mixed system of financial incentives. But the worry here is that it may not be sufficiently effective to balance population increases caused by ageing enhancement, especially when we consider some of the potential economic consequences of an ageing and/or declining population in developed countries. Still, I have not ruled out the possibility of striking a reasonable balance, perhaps supplemented by other measures, such as those that I will outline in Chapter 8. If such a policy can be found, the Overpopulation Objection fails.

Even if such a balance cannot be found, there is a further problem for the Overpopulation Objection as outlined at the beginning of this chapter. The objection rests on the unacceptability of acts that will result in many people falling below a particular threshold of welfare. But it also relies on the idea that *not* performing a particular act will avoid such results. The problem for the argument is that a failure to provide ageing enhancement *will* also undermine several fundamental interests for those who would benefit from enhancement. It is clear that some levels of physical senescence significantly reduce the amount of control one has over important decisions, and can have an adverse effect on welfare. Similarly, death from age-related diseases signals the end of all choice and welfare. Ageing can also lead to a failure of bodily integrity since it reduces one's ability to have full control over one's body.

The empirical premise P12 claims that a refusal to pursue ageing enhancement will avoid unsustainable overpopulation. This may be untrue because avoiding ageing enhancement may not be sufficient to avoid overpopulation. But even if it is true, it should now be clear that it

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Quiggin (2012), both discussions of how the technological advancements of the 20th century have not led, as some (including Keynes) predicted, to an increase in leisure time because of economic forces.

does not connect with the moral premise P10 in the right way to complete the argument. P10 says that we should avoid an act A which, if pursued, would lead to a number of people falling below a threshold T, but only if not pursuing A avoided that unwelcome result. But as I have argued, not pursuing ageing enhancement will bring a number of people below T: people who would have benefitted from ageing enhancement. So a version of the Overpopulation Objection that defends P12 by appeal to something like fundamental interests in reproduction also undermines its own conclusion (C2) that we clearly ought to avoid ageing enhancement, or at least highlights the incompleteness of that conclusion. That is, even if it is true that there are strong moral reasons to avoid ageing enhancement – if the only effective alternative is an unacceptable kind of reproductive control – there are also similarly strong reasons of the same kind to support it. We either need to think of a third option or, if none is available, find some other way of deciding between two unattractive options. If rejecting ageing enhancement and placing constraints on reproduction are the only options, it may of course be that on balance it is better to reject ageing enhancement; but this cannot be decided authoritatively by the claim that ageing enhancement will (indirectly) harm many people, because not pursuing ageing enhancement will also harm many people.

7.6 Summary

This chapter outlined the Overpopulation Objection, and considered some initial responses to it. A number of suggestions relating to controls on reproduction were found wanting from an ethical standpoint. While there are ethically permissible ways to curb reproduction, I suggested that it is at least unclear whether these would be sufficiently effective to balance the population growth generated by significant ageing enhancement, while sufficiently effective incentives may threaten people's fundamental interests and lose their ethical permissibility.

However, I also suggested that this does not lend much support to the Overpopulation Objection, since a refusal to pursue ageing enhancement also threatens fundamental interests. If failure to extend life is also harmful to fundamental interests, then there is no simple argument from the view that restrictions on reproduction threaten fundamental interests to the conclusion that we should not pursue ageing enhancement.

If threatening fundamental interests renders an act impermissible, then many forms of reproductive control are ruled out, but so is a refusal to pursue ageing enhancement. But this seems an implausible position, since it implies that it is morally impermissible to refuse any life-saving intervention. More plausibly, undermining fundamental interests gives us a strong but defeasible reason to avoid a particular choice; but these reasons may need to be weighed against one another. On this view, empirical factors will decide whether it is better to curb reproduction, refuse ageing enhancement, or even allow overpopulation (assuming that the only objection to this is itself the effect on fundamental interests for many people).

As I briefly outlined in Section 7.4, there is a further option, which is to focus primarily on consumption. It may not allow completely unrestricted reproduction or avoid all restrictions on ageing enhancement; but it at least gives us some leeway to try to avoid the worst excesses of both policies. Chapter 8 outlines this policy.

Chapter 8: The Overpopulation Objection – Consumption and risks

I have suggested that although addressing there are potentially permissible ways to address overpopulation by regulating reproduction, even these face problematic tensions between efficacy and respect for fundamental interests. However, an appeal to fundamental interests cannot by itself rule out the pursuit of ageing enhancement, because fundamental interests are also involved in the provision and denial of enhancement. Although further argument might decide between these two options, this chapter argues that an alternative approach, which focuses on consumption, is preferable.

Section 8.1 suggests two points of clarification about the concept of overpopulation. As I suggested in Chapter 7, the question of whether an area – including the world – is overpopulated can only be answered by reference to some threshold, below which population increase threatens to bring some unacceptable number of people. As Ryberg (1998, 413) puts it "Overpopulation is a normative concept...That a population is *too large* cannot...be deduced from any statistical data about population size, growth or density [alone]". I also outline Ord's (2014) distinction between 'hard' and 'soft' limits when it comes to overpopulation. Concerns about overpopulation are indeterminate between these two.

This has implications for the relevance of consumption: Section 8.2 argues that if we are only concerned with soft limits, we should prefer reductions in consumption over curtailments of reproduction or refusal to engage in life-extending medical interventions, including ageing enhancement, because the interests involved in the latter two are considerably more morally compelling. This section argues for universal consumption reductions over making access to enhancement contingent on consumption behaviour, and considers some ethical worries about state intervention in reducing consumption.

It is morally best to reduce consumption and pursue ageing enhancement. However, Section 8.3 considers a worry that even if we could, and should, take this route we will not in fact change our consumption behaviour as required. Instead, we will pursue ageing enhancement under the guise of a commitment to cut consumption, but then fail to do so, leading to a worse situation than if we had avoided enhancement in the first place. This leads me in Section 8.4 to consider the role of uncertainty in our moral decision making. I suggest that an appeal to risk cannot mandate against research into ageing enhancement – and indeed demands it – but I also argue in Section 8.4.1 that risk might inform how we actually implement ageing enhancement, and how we should prepare for it.

It is worth acknowledging that economic stagnation, a potential problem raised against reproductive controls at the end of Chapter 7, is also connected by many economists with

reductions in consumption (although this idea has been criticised).[84] So there may be similar tensions between national demands for increased consumption to maintain economic growth, and global requirements for reduced consumption in developed nations. If both plausible responses to overpopulation risk economic decline, that can hardly be an objection to either (so long as we judge economic decline less serious than overpopulation).

Nonetheless, several considerations favour a focus on consumption. First, some ways of 'reducing' consumption actually involve transferring consumption to different media e.g. a transfer to renewable energy sources. The unwieldy nature of policies to control population size through influencing individual reproductive decisions – especially with such blunt tools as financial incentives – coupled with countervailing pressure (real or perceived) to increase population levels locally suggest that reductions in consumption may be necessary in any case. And as I will suggest in Section 8.2, a focus on consumption is in any case ethically preferable to a focus on reproduction.

8.1 Soft and hard limits

A concern about overpopulation is essentially a concern that we will breach various sustainable limits, of space, resources, and other finite goods. As Ord (2014) argues, we should distinguish between two kinds of limit with respect to population growth. "Soft limits" occur when a population size will have unwanted results if we do not change our behaviour, but ethically acceptable changes are available that would avoid these results. According to Ord (55), soft limits are "really a sort of cost" rather than a limit as such. Many of us enjoy our current level of consumption, and may want to increase it, so it would be costly to rein ourselves in; but since there are avenues that are (practically and morally) open to us which will avoid catastrophe, we cannot really conceive of soft limits as limits. While Ord is right that soft limits are not limits in the sense that we are incapable of surmounting them, it is perhaps misleading from a policy perspective to suppose that soft limits are not 'really' limits; there are all sorts of ethically permissible changes we might make to accommodate greater population that require significant changes to our lifestyles, and which any government or other institution would face significant resistance in pursuing. Soft limits are limits in a perfectly meaningful sense.

Still, they are not the most stringent kind of limit; there are also population levels whose consumption pressures cannot be accommodated by even quite significant (ethically acceptable) changes in behaviour, so that we "can't exceed that population without disaster" (56). These are

[84] e.g. Jolly et al (1998: 1). My definition of consumption differs from a mainstream economic definition, which counts consumption as consumer spending, in contrast with production. My understanding of consumption includes production in this sense, so even those who argue that economic consumption is not a major driver of growth, but production is, may worry from this perspective about restrictions on 'consumption' as I understand it.

"hard limits". And without behavioural changes, soft limits result in similarly disastrous results as hard ones.

Ord argues that we are currently approaching various soft limits, but that because there are significant changes we can make, we cannot yet see ourselves as broaching hard limits (55). Of course, even if Ord is right about this, we cannot necessarily surmise that ageing enhancement too will bring us only to soft limits. There is a possibility – depending on its effectiveness, uptake and other external factors – that certain levels of ageing enhancement will bring about hard limits. Our current position with respect to that possibility is one of uncertainty, so hard limits constitute a risk of ageing enhancement, an issue I address in Section 8.4. Before that, Section 8.2 argues that if ageing enhancement only involves soft limits then we should prefer changes in consumption to restrictions on reproduction or a refusal to engage in ageing enhancement.

8.2 Is it ethical to reduce consumption?

This section defends the claim that if we are approaching soft limits, we ought to prefer reductions in consumption to restrictions on reproduction, or refusal to save and extend lives. This does not entail the claim that reductions in consumption will be sufficient, only that they should be our initial recourse.

While some levels of consumption reduction may not require significant changes in living standards, others will. So if I am right that even quite significant reductions in consumption are preferable to a refusal to extend people's lives or controls on reproduction, this implies that we should prefer to reduce living standards rather than reduce absolute population size up until we hit a lower threshold of quality of life, at which point we should switch our attention to reducing numbers instead (although if we can reduce numbers voluntarily and without coercion, then that is of course preferable to a reduction in living standards). I will now consider some possible objections to this claim.

One worry is that this claim bears similarity to Parfit's (1984: 381-391) infamous "repugnant conclusion" that under certain conditions we are morally obligated to increase a population's size, even if that significantly decreases quality of life, up to the point where everyone has a life that is only just barely worth living. As Parfit says, this conclusion seems morally repugnant; but it might appear that a policy that uniformly prefers cutting quality of life (until some minimal threshold for individuals) over refusing to extend lives or intervening in reproduction faces a similarly appalling logic.

However, I have not argued that we have an obligation to create new individuals where we can – and indeed, I rejected that claim at the start of Chapter 7 – so my claim is not nearly so demanding as the repugnant conclusion. There is no obligation on people to procreate where that would increase the number of barely tolerable lives in existence; rather, the obligation is not

to restrict procreative rights in ways that are coercive or invasive, or to refuse to extend people's lives, where cuts in consumption could address the worries associated with increased population.

Moreover, the intuitive repugnance of Parfit's conclusion seems to depend on the assumption that the threshold is extremely low, so that we imagine vast numbers of people not with worthwhile existence, but with just barely *tolerable* existence. I suggested in Chapter 4 that the idea of tolerability should contribute to a lower sufficientarian threshold. But I also insisted that sufficientarians need not aim to maximise the number of people with tolerable lives, as the repugnant conclusion insists. Rather, in outlining what constitutes excess consumption, we should refer back to the second sufficientarian factor in a lower threshold, worthwhile existence. When thinking about levels of consumption, the idea of a worthwhile existence implies that it is ethically preferable to reduce consumption levels to the point at which people consider their existence worthwhile, or could reasonably be supposed to do so if they made such judgements. There is no reason why that judgement might not include, for many of us, some of things that may superficially seem to fall by the wayside when we talk about cutting 'unnecessary' consumption. If a life of bare subsistence is judged by most people not worthwhile – and it is surely such a judgement that makes the repugnant conclusion seem so repugnant – then the view I have outlined draws the line of 'excess' consumption above bare subsistence, so that it makes some reference to culture, frivolity, and so forth. Many of us in the developed world are very far above even this line in our current consumption habits. In principle, there seems no reason to think that there is a repugnant conclusion at the end of the claim that we ought to prefer cutting excess consumption in many cases over refusing to save lives or constraining reproduction.

A more plausible concern is that some people would reasonably prefer to forego ageing enhancement than face significant cuts in their levels of consumption. So we face a parallel issue to that faced by many proponents of reproductive controls as a response to ageing enhancement: some people reasonably prefer not to make the relevant trade, and it seems *prima facie* unattractive to force on option on them when they prefer the other. The best option is presumably to give people a free choice; since either preference is reasonable, it is *prima facie* better to offer both options.. One way of doing this is by tying access to enhancement to personal reductions in consumption, akin to the proposals on reproduction (Reversal; Sterilise; and Sterilise+) described in Section 7.3. Unlike reproduction, consumption really is for many people something over which they have individual control, and so does not face the problem of unavoidably tying one person's access to ageing enhancement to another's decision.

But there are problems with this policy. Not everyone does have significant control over their consumption patterns. Children and other dependants are a clear case; although from a policy perspective we could clearly insist on the link being implemented after a particular age

threshold, such a caveat clearly reduces the ameliorative force of making access to enhancement conditional on consumption habits. And while many states already have reliable systems for monitoring personal reproduction, the monitoring of personal consumption habits would require significantly more comprehensive surveillance of citizens. Perhaps we could set things up so that people who wanted to access ageing enhancement would be barred from certain consumption-intensive industries, or establish some technology for tracking personal consumption. This looks practically demanding, and far more intrusive than other options; our route from our current society to there is unclear, though not impossible.

A further problem is that if those who undergo ageing enhancement contribute to population growth not just by not dying, but also by having more children, these additional people might choose not to constrain their consumption; the consumption impact of one enhanced person might thus be larger than they could cancel out by cutting their personal consumption.

Most problematically, the most effective method of curbing consumption is likely to involve a focus on resource-intensive production, and to engage in large-scale transformation of energy usage and product availability at a systemic level. While overall consumption is reducible in some sense to individual decisions, those decisions are made within social and economic contexts that have significant impact on the overall picture. This is not to say that there is nothing individuals can do about their consumption habits, although this clearly varies depending on personal circumstance; but to focus on individual consumption habits is to miss the systemic problems involved in wasteful and excessive consumption. Even if it were morally permissible to focus solely on individual consumption when individuals can only choose among the array of options available to them, the practicalities and politics of such a divided society look significantly demanding, especially if ageing enhancement is widely adopted, and the comparative effectiveness of such targeted restrictions is questionable.

Still, since preferences for consumption and ageing enhancement are both prudentially reasonable, one might think that even if we must choose a single policy to apply to everyone, there is nothing to choose between them; either way, some people will have a significant cost imposed on them for a benefit which, in their eyes, is not worth it.

But there are important differences between what it is reasonable to prefer as an individual, and what it is appropriate to impose on others. According to time-relative sufficientarianism, we have greater reason to avoid people falling below sufficiency than to avoid them incurring other costs. A failure to pursue ageing enhancement compromises time-relative sufficientarianism because it threatens fundamental interests. But restrictions on consumption do not necessarily suffer the same problem. This marks an important difference in our collective choice that is absent in individual preferences.

Excess consumption does often involve interests that I characterised as fundamental in Chapter 7. For instance, consumption is a source of personal welfare and restricting it involves limiting

free choice. This suggests a need for further refinement of the idea of fundamental interests; categories such as 'welfare' and 'personal choice' are too broad to give us a reasonable restriction on policy. For instance, while exercise of choice is important, such that curtailment of choice by the state always requires justification, it does not follow that all instances of exercising choice are equally in need of protection. Some choices are trivial to the chooser, and a great deal of consumption involves choices that fall in this category. Some research suggests that people make a conceptual distinction in their consumption habits between necessary and luxury consumption (e.g. Lunt and Livingstone, 1992: 150-158), although this distinction may shift according to social and economic context, and even according to the framework within which people were considering the distinction (e.g. subsistence necessity versus 'modern life' necessity). This implies that even as consumers we make a distinction between choices that are fundamentally important, and choices we make simply because we are able to. This maps onto the idea of a worthwhile existence; some choices relate to matters that people judge centrally important to having a worthwhile life, whereas many others do not. And even if there is considerable deviation between different individuals, from a policy perspective we can again assume some core commonality of the kinds of decisions that people will think it fundamentally important to have free choice over.

One worry is that reducing consumption is overly intrusive compared with refusal to pursue ageing enhancement, since the latter only involves inaction. The truth of this claim will depend on certain facts about the affordability of enhancement; if certain optimistic views discussed in Section 6.3.2 are correct, ageing enhancement might eventually be sufficiently inexpensive that many people will be able to afford it; if we have chosen a rejection of ageing enhancement as our route to avoiding overpopulation, the state might have to intervene if sufficient numbers of people were able to make use of the technology.

Control of quite general consumption by the state also need not be as intrusive as regulating the minutiae of individual behaviour. The idea of the state restricting consumption can conjure images of bureaucrats coming round to individual homes to assess how long each individual is spending in the shower; to have such a regime applied to all areas of consumption would be egregiously intrusive, and practically unworkable. But we can see large-scale efficiency improvements in consumption practices by quite general measures: governments can change investment policies; levy prohibitive taxation;[85] pass environmental regulations that place the burden of saving on manufacturers and distributors; prohibit certain products from entering the market; and implement efficiency measures on a mass scale. Indeed, some environmentalists insist that an important way to tackle overconsumption is not by assuming that individual consumers are at fault, but by addressing systemic pressures that lead companies to *produce* in excess. For instance, Fitz (2013) says that "instead of focusing on food eaten by individual

[85] Although this runs the risk of disproportionately affecting the worst off if not managed well.

consumers, rationing by production would severely limit the amount of resources going into packaging, processing, chemicalizing, storing, transporting and genetically engineering food".[86]

It may still seem unjustified to impose significant cuts in consumption on a population, even in the name of a considerable benefit, without consulting them, especially if those who prefer to maintain current levels of consumption are in the majority. One response to this is to suggest a referendum on the issue; if the majority of people prefer foregoing ageing enhancement, then it would be deemed illegitimate to impose it on them at the cost of significant cuts in consumption.

I will consider a further, pragmatic argument for this in Section 8.5. But proponents of this kind of argument must be cautious. As Saunders (2010) notes, democratic legitimacy is a broader concept than mere majoritarianism. It would not be democratically legitimate, for instance, to vote for the violation of a social minority's basic legal rights, even if most of us preferred that policy. While I do not suggest that extending people's lives, or supporting medical interventions that would avoid them becoming significantly frail, should be basic legal rights, this point nonetheless retains some of its force when applied to the diminution of fundamental interests. Democracy in a broad sense demands that we respect one another as citizens, which includes enabling a basic ability to function in society; this may include access to certain kinds of health intervention. This by no means demands that we take all and every measure available, but it does suggest that a simple majoritarian vote may not be a legitimate way to decide on this issue.

A further worry has a more global scope. Even if current levels of consumption in wealthy countries are excessive, there are countries in which we ought to support and facilitate economic development because of the poor quality of life experienced by many of their residents. Development requires resource consumption, and developed countries use more resources per capita. So a further worry is that a focus on consumption clashes with the obligation to support economic development. Weld (2012: 57) puts this charge forcefully when she says that "those who claim consumption is the problem consider the poor virtuous only as long as they remain poor". A focus on consumption, goes the charge, commits us to rejecting the claims of the worst off to economic development.

But while one could take the restriction of consumption to mandate the rejection of development aims, this is not necessary.[87] Focus on consumption derives its legitimacy from the expected impact on fundamental interests of alternatives. If a focus on reducing consumption is taken so far that it mandates keeping individuals at levels of development that substantially affect their fundamental interests, then it undermines its own rationale.

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[86] One might agree with some of these and not others. Genetic modification of food is contentious among many on the environmental left, but we need to beware of automatically dismissing technologies that have the ability to provide basic nourishment to many more people.

[87] See, for example, the United Nations' Division for Sustainable Development.

An overall reduction in consumption also need not demand equal reductions everywhere. It may be that developing countries cannot follow the same path to development as has been enjoyed by currently wealthy countries. But this does not mean that those countries cannot continue to develop while wealthy countries make the first and most significant moves in cutting consumption. This involves sacrifice on the part of both groups; developing countries must resign themselves to eschewing the heights of wealth currently enjoyed by developed countries, who must in turn accept the imperative to cut first and further. Developed countries should not attempt, either rhetorically or through more robust pressure, to cap economic development in other countries at levels below which they would not be prepared to find themselves.[88]

8.3 Moral failure

If ageing enhancement will not make us breach soft limits, there is no distinct problem of overpopulation. If it will bring us up against soft limits, the right thing to do is to control consumption. And if hard limits are in store, then a focus on consumption is still preferable, even if we must also make more fundamental sacrifices, perhaps including restrictions on enhancement and/or reproduction.

However, this range of options does not tell us what to do currently, because we do not know which of these scenarios will emerge. Even if we could be sure that ageing enhancement would only bring the population up to soft limits, establishing that we could cope by reducing our consumption in such a case does not demonstrate that we *will* do so, for we may not be willing to change.[89] This might support a pragmatic argument that acknowledges that there are morally feasible ways to engage in ageing enhancement, but denies that these routes are sufficiently likely that we can rely on them; since we will not in fact engage in the right mitigating behaviours, we should act as if such escape routes were unavailable.

To see how this argument would work, take the analogous, more mainstream debate over whether a response to overpopulation should focus on reproduction or consumption. Kates (2004) and Cafaro (2012) both claim that regulating reproduction is the only feasible option, irrespective of whether a focus on consumption is morally preferable, because the necessary cuts in consumption are politically and personally infeasible. Cafaro claims we should focus on reproduction because of the "unwillingness of most governments" and the fact that "human beings have proven selfish and short-sighted" (50) when it comes to curbing consumption. Kates (71) appeals to public unwillingness to cut personal consumption, claiming that "it is

[88] As Harris (1997) shows, wealth transfers from wealthy to poor countries to alleviate environmental pressure are justifiable from a range of views on justice.

[89] Ord (56) also notes this issue, though he does not discuss it in detail.

likely that, faced with a choice between population reduction or dramatic reductions in consumption...most people would choose the former".

Although neither author discusses it, this worry about 'moral failure' may have implications for ageing enhancement. If governments support ageing enhancement (which, in certain circumstances, I have claimed they should), but we find that this will threaten soft limits, they should also implement consumption controls; if they will not do the latter, they cannot justify the former. But, says the extended moral failure objection, governments *will not* try to control consumption (or reproduction) because they know that they will quickly be voted out of office if they try to, that their citizens will not countenance such controls, and that special interest groups and lobbyists will revoke influential financial and vocal support. This would then result in ageing enhancement without mitigating policies, translating soft limits into *de facto* hard limits. If overpopulation is severe, this may lead to greater overall harm (and, as I will note below, a harm that is more unfairly distributed) than refusing to engage in ageing enhancement. So according to the argument from moral failure, we ought not to engage in ageing enhancement even if there is a permissible way to do so, because we will not take that permissible option. It thus assumes that since we will not behave as we ought to once we access ageing enhancement, we ought not to start down that road at all.

One might conclude that this shows that although it was right to consider alternatives to reproductive controls, they are ultimately our best option. As Chapter 7 acknowledged, there are ways of regulating reproduction that, while somewhat unattractive, need not be impermissibly so. And if we are to focus on population numbers, as Cafaro and Kates insist, Cutas and Harris (2007: 797-798) note that reproduction currently contributes to population growth in a way that dwarfs the contribution of advances in life-extending medical care. So it may seem that Cafaro and Kates and – albeit from a different perspective – the majority of ageing enhancement proponents have things right, and we should turn to reproductive controls after all.

However, things are not so simple, particularly if we consider more radical increase to lifespans. It is overly simplistic to separate out the contributions of births and (avoided) deaths to overpopulation; a birth rate can only be meaningfully said to contribute to a certain level of population growth given a particular death rate. When the death rate drops, as it would under ageing enhancement, the degree to which reproduction would have to be cut to achieve the same reduction in population growth also increases.[90]

It is worth reiterating that we also cannot rely, as Cutas and Harris (ibid) appear to, on the thought that ageing enhancement would predominantly benefit those in wealthy countries where fertility is already quite low, and shows no sign of increasing; as I have said, if the real concern is the increase in consumption that derives from population growth, population increases in the developed world, even if slower than that in the developing world, ought to

[90] This may be less of a problem for Cafaro and Kates, if they would also oppose ageing enhancement.

worry us more in global terms. The greater the effect of ageing enhancement, the more restrictive we would have to be on reproduction if population numbers were our focus. And this reduces both the ethical permissibility and, importantly for the argument in question, the popular acceptability, of necessary restrictions on reproduction. Indeed, what is striking about the pessimistic argument offered by Cafaro and Kates is that it moves from popular unwillingness to act on consumption to a recommendation that the state constrains reproduction. But there is no reason to be more optimistic about reproductive restrictions targeted at well-off members of wealthy countries, who already have fairly low birth rates and are less likely to be amenable to the levels of financial incentives that traditional targets of such population policies – i.e. poor people – may feel forced to accept.

In fact, it seems likely that a refusal to engage in ageing enhancement is the most plausible in terms of public acceptability. As I noted in Section 7.3, there is a possible argument that although ageing enhancement is not intrinsically different to other medical interventions, its lack of integration in popular expectations is a morally relevant extrinsic difference. A similar argument might be offered here; although a refusal to engage in ageing enhancement is morally worse than controls on consumption (and maybe, depending on the mechanism, on reproduction) it is morally better that *some* action be taken than none, and ageing enhancement may be the most feasible target. So if Cafaro's and Kates' pessimism is justified, and we are in fact facing overpopulation that we simply will not take appropriate action against, foregoing ageing enhancement seems a viable option. Of course, if they are right then this alone will not solve the problem. But at the very least, it will not increase the pressure on population size or consumption, reducing the political difficulty of the further task of coping with an already sizeable concern.

The asymmetry in this argument between consumption and reproduction on the one hand, and ageing enhancement on the other is a pragmatic difference, where some activities are embedded in our social practices so that they are difficult to reverse in a democratic way, and others are not. With novel and controversial[91] technologies such as ageing enhancement, there may be less resistance to a refusal to adopt the technology than to imposing burdens on existing practices. First, as I have noted, a failure to benefit is non-intrusive, and foregoing ageing enhancement might – depending on the level of uptake – only require inaction. Second, people tend to regret less severely foregone benefits than the loss of benefits we already have (see e.g. Tversky and Kahnemann, 1984), even if the two are equivalent in value. So the fact that ageing enhancement is a novel technology may be a politically relevant factor in how easy it would be to regulate.

[91] See, e.g. Pew Research Center (2013), which suggests that "more [Americans] think it would be a bad thing than a good thing for society if people lived decades longer than is possible today". I do not mean to endorse this conclusion, only to point out that realistic moral proposals have to take account of how people will actually behave.

So even if the morally ideal option is to pursue ageing enhancement along with (perhaps significant) changes in our consumption, if we will not in fact make those changes then we ought not to pursue ageing enhancement. As Baker (2012) puts it, "when our vices will lead to problems, we ought to opt for less damage", even if a more virtuous response is available, and would have us choose differently.[92] Even though governments *really* ought to reduce consumption and support ageing enhancement, this should not change our practical advice if they won't behave as they ought. If governments withdrew support for ageing enhancement because of the strength of popular opinion against reductions in consumption, or because of the threats of lobbyists, they would have been pressured into doing the wrong thing. But it is the wrong thing that we can nonetheless say that they 'should' do, at least in some sense of 'should', given relevant assumptions. Of course, this kind of argument does not single out ageing enhancement alone; as I suggested in earlier discussion it seems likely to identify a number of novel life-extending treatments that do not yet have the advantage of being embedded in our expectations.

Still, the argument guides us only if we in fact will not engage in appropriate control of our consumption or reproduction; it does not apply simply when the right action would be difficult or costly. Predictions about the feasibility of restrictions on consumption are less reliable than the moral failure objection implies. Cafaro and Kates cite our past unwillingness to voluntarily restrict our consumption as evidence that restrictions on consumption are infeasible. But rather than indicating that people are too selfish to change, this may indicate a sense of the futility of acting alone. For instance, people may be concerned with issues related to overconsumption, but feel that there is little purpose in modifying their own behaviour without reassurance that this would be replicated by government, business and other individuals,[93] or face uncertainty about how to begin what may seem like an overwhelming task[94] – precisely the kind of coordination that state intervention could achieve. While this is not conclusive evidence that we will make the necessary changes, we also cannot move so easily from the failure of individuals to reduce consumption to the idea that we will collectively punish a government that made significant changes. As such, it seems as though we are in fact dealing with a question of risk rather than certainty.

[92] An appeal to the right to life cannot help here (e.g. Cutas, 2008). If we do not significantly restrict our consumption, access to ageing enhancement competes with the effects of significantly worse climate change and other results of overconsumption; the resulting environmental and resource catastrophes will lead to deaths that otherwise would not have occurred, so lives are at risk either way.

[93] e.g. The Harwood Group (1995)

[94] e.g. Newton and Meyer (2013)

8.4 Imposing risk

I have considered various worries about how population – and consumption – might become a sufficiently significant concern to merit a refusal to pursue ageing enhancement. Ageing enhancement might take us to a hard limit in terms of consumption that would require unethical responses to mitigate. It might produce a soft limit that would, due to our moral intransigence, effectively be a hard limit.

The issue that ends this chapter, and the thesis, is risk. The threat of overpopulation is unnerving, but it is not guaranteed; different possible levels of overpopulation constitute risks of engaging in ageing enhancement. These risks are not easily quantifiable; they are thus not just risks but 'uncertainties'.[95] That is partly due to the intervention under consideration; human ageing enhancement is not currently feasible, so we cannot so easily constrain possibilities when we consider how effective, how widely adopted, or how expensive it might be. There are also uncertainties about how people will behave in an ageing-enhanced world. Perhaps they will recognise the need to cut consumption or reproduction. Perhaps they will do so voluntarily as they adapt to a new extended lifestyle, or perhaps they will demand extended life without sacrifice. For all that Kates and Casal rely on past failure to predict future intransigence, a future of ageing enhancement is uncertain.

Since even the probability of these risks is unknown, we cannot rely in any simple way on traditional tools of decision-making such as cost-benefit analysis. We need to consider how to act given significant uncertainty. This is a common feature of novel technologies, but there is a complicating consideration for ageing enhancement; while for many technologies the uncertainties that concern us would result from the technology misfiring, the overpopulation concern for ageing enhancement increases as the technology is more successful and widely adopted. This means that whereas in a typical case our desire for successful functioning will ideally lead to measures that reduce risk, a desire for successful ageing enhancement increases certain risks. If we want ageing enhancement to be widely accessible, not simply reserved for the privileged, greater success again means greater negative impact.

Other uncertainties with regard to ageing enhancement and overpopulation do not obviously have this feature; it seems unlikely that people would be *less* willing to change their reproductive or consumption behaviours the more successful and widely adopted ageing enhancement becomes. But proponents of ageing enhancement cannot simply engage in platitudes about minimising risk, since some risk is at least partially predicated on the central aim of ageing

[95] Knight (1921) classifies risks as possibilities whose odds we can know, and uncertainties as those whose odds we *cannot*. I will use the term slightly differently, where uncertainties are risks whose probability is inaccessible given our current epistemic situation. On this view, new information might transform an uncertainty into a risk.

enhancement. In part, how effective we can allow ageing enhancement to be depends on public willingness to alter behaviours. As such I will focus on this uncertainty in discussion.

One strategy when faced with uncertainty is to adopt the 'precautionary principle' (PP). As Harris and Holm (2002) note, it is misleading to say that there is a single principle described by all mentions of PP, but one interpretation is that where there is a suspected harm from a novel practice, the burden falls on proponents to prove that the harm will not occur, or will not be significant. Further demands may include that this principle applies even when those concerns lack demonstrated links with the technology in question.[96] In the absence of such proof, PP says that we should take some aversive action, such as a moratorium or ban on research.

As Harris and Holm argue, this is unwarrantedly risk-averse, and effectively rules out the development of any new technology so long as we can dream up some possible disaster that might occur from it.[97] Moreover, it is by now a familiar criticism that the principle as stated ignores harms that can occur from failing to employ novel technologies, and which can be as bad as or worse than harms of application (e.g. Sunstein, 2003). Harris and Holm further claim that any version of PP that exhibits sufficiently weak risk-aversion to become plausible will have to include some reference to proportional risk, and hence recommend the gathering and weighing of evidence of harms and benefits in the usual fashion, rather than the kinds of moratoria or bans that often feature in versions of PP.

Several distinct points emerge when applying this discussion to ageing enhancement. An application of some variant of PP to ageing enhancement need not invoke one of the more questionable elements of the PP that Harris and Holm criticise, that there need be no demonstrated link between a technology and a possible harmful effect. The links between lowering death rates and population increase, and between population increase and consumption, are in principle clear. And even if our collective failure to control our consumption thus far does not reliably predict the future as Cafaro and Kates assume, that failure does demonstrate the plausibility of some political obstacles that figure in their concerns. So if there is an available version of PP that does not invoke this strong demand, but does not collapse as Harris and Holm suggest into an injunction to gather more information, it might be applicable to ageing enhancement. Such a view would say that when a novel technology

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[96] Even if the normal evidential boundaries do not apply, I assume that some kind of conceivability boundaries must. While I will criticise the principle as it stands, it would be obviously indefensible to insist that proponents of novel technologies must answer to any and all worries, no matter how outlandish.

[97] Weaker versions of PP might suggest that we take stronger than normal preventive or safety measures in the face of uncertainty. But even this is problematic. Without some baseline to decide what constitutes normal precaution, even weak PP risks saddling new technologies with prohibitively expensive and onerous safety regulations.

threatens some harm through *established* links, but we cannot plausibly even estimate the probability of this occurring, some (as yet undetermined) precautionary action is appropriate.

Precisely what that precautionary action is will depend in part on whether we are considering research into a technology or its application. With regard to research, another of Harris and Holm's comments is relevant: if we are ignorant about risk, research is the proper response according to usual standards of choice (2002: 362). If PP tells us that the proper precautionary activity is to gather more data so that we can make a more informed decision, it fails to be a distinct position with regard to research, for it essentially tells us to carry on as normal. And it seems clear that if we are considering research into ageing enhancement, a moratorium or ban on relevant research is not an appropriate response to the risk of overpopulation; it may even be a requirement that we support some research into how effective ageing enhancement will be, since that will allow us to make a more informed decision on a technology where both implementation and prohibition could have significant costs.

Still, since scientific research on effectiveness is only one part of the total relevant evidence regarding the risk of overpopulation, we are left with the question of what to do if we develop a workable enhancement, and we have some notion of its effectiveness, but we are still unsure about its overall impact due to the other risks (in particular, moral intransigence) mentioned in this chapter. Section 8.4.1 discusses this issue.

8.4.1 Application

Assume that we know roughly how effective ageing enhancement will be, and how popular its uptake, and so have some idea of what level of consumption reduction we must engage in (and also that reducing consumption will be sufficient). We are thus still faced with uncertainty over public willingness to accept reductions in consumption. It seems clear that, just as with research into the effectiveness of ageing enhancement, we should attempt to gather information on this uncertainty. However, unlike the issue of strict research, gathering evidence here is consistent with a moratorium on actual implementation. So perhaps a restricted version of PP, which tells us to hold fire on application of ageing enhancement until we have resolved the uncertainties involved in our risk assessments, could be both plausible and distinctive. In the absence of clear evidence that people will accept the necessary behavioural changes, this principle says that we should assume they will not.

This ignores another of Harris and Holm's objections, that PP contains a significant bias toward inaction, even when inaction also has significant costs. For ageing enhancement, this cost is numerous deaths from old age, and significant suffering caused by physical senescence. So we are still faced with risk of harm on each side. In fact, the uncertainty in this case is asymmetrical in a way that may favour ageing enhancement. While we have established that we cannot be sure whether overpopulation will occur, we can be sure that people will die if we do not extend their lives. This asymmetry does not apply pre-research; at that stage, since we cannot be sure

how effective the intervention is, we also cannot be sure how much harm we risk imposing if we refuse to research ageing enhancement. Once we have established these facts, there is greater certainty of the risk involved if we refuse to apply ageing enhancement than if we hold back. However, even if we can establish the costs of refusal, if we are uncertain about the risks of overpopulation we will also be uncertain whether the expected cost outweighs the expected benefit. So any asymmetry cannot ultimately resolve the question in proponents' favour.

Two further important features of ageing enhancement that are not present in all novel technologies are consent and the distribution of risks and benefits. Harris and Holm criticise PP's injunction to avoid any activity that risks harm to humans as impossibly restrictive, noting that it "entails that the inventor of apple pie should have applied the PP, and let the first pie be the last, since there have been people who have choked on apple pie" (360). This is a reasonable criticism of PP itself, but one feature of the risk associated with apple pie that is not present with ageing enhancement and many other technologies is that the individual taking on the risk is able to consent to it on the basis of the expected benefit.

The absence of consent may be a morally salient difference; as Ryan (2007:174) puts it, while we might "think someone *foolish* to drive at high speed round a racetrack [risking only himself]; we would think him *wicked* if he did it...on a busy main road [risking others]". The thought here is that the same harm, with the same probability, requires greater caution if the risks involved are not consented to. Shrader-Frechette (1991: 105) suggests that we should make a clear moral distinction between chosen and imposed risks.

This seems overly restrictive; when you drive a car, putting fellow drivers at risk, it is not true that they have chosen that risk. What they have chosen to do is drive, albeit in the knowledge that they risk an accident. But as Thomson (1986) notes, choosing to take a risk is not equivalent to consenting to that risk. Hansson (2007: 31) suggests that we should instead refer to a system of risk imposition; while you might not choose the risk I put you under as a fellow driver, you also put me under the same risk when you drive; since we all benefit from this system of risks, and engage voluntarily in it, we can be seen as consenting to it. Even this seems too restrictive; if we required everyone who was put at risk by a practice to also be capable of putting others at similar risk with the same practice, pedestrians with disabilities that make them unable to drive would undermine this practice. Instead, we should focus on the *distribution* of benefits and risks of a practice, consented or otherwise. We should be warier of a simple trade off of harms against benefits if there is a considerable asymmetry in their distribution, especially if those who lose out in a distribution tend to lose out in such tradeoffs repeatedly.

So it is more important to note the distribution of benefits and risks than to focus strictly on consent, although very often an imbalance in risk and benefit arises because of a lack of consent. The harm of overpopulation most significantly affects those in poorer countries, while the risk being run is that citizens of developed countries will fail to curb their consumption

adequately. Of course, there is also risk from overpopulation for the developed world, but the risk is far greater for less wealthy states. So unless we commit to extending access beyond the wealthy, ageing enhancement is a clear case where risks are distributed unevenly, and where those who bear the greatest risk tend to lose out in such trade-offs anyway. This situation is made considerably starker if pessimistic predictions discussed in Chapter 6 are correct, and ageing enhancement will predominantly benefit the wealthy. Ageing enhancement is by no means unique in this respect; many technological developments benefit the already wealthy while causing problems that predominantly affect the worst off, who often also lack any influence over those decisions. If ageing enhancement is more widely available, then this asymmetry is less stark, though it will still be the case that the bulk of the risk is borne by the worst off.

Uncertainty of efficacy can only be solved by research; a moratorium on research necessarily commits us to acting under ignorance. But uncertainty of the consequences of action is consistent both with refusing to implement a technology, and with implementing it. When faced with an uncertainty whether, if we began to implement ageing enhancement at t_1, we would take the necessary ameliorating action to avoid disaster at t_2, we have three broad options. First, we could refuse to act at t_1, on the grounds that the overall profile of risk and benefit is already unfairly skewed against the poor. This seems overly pessimistic; even if an uneven risk profile means that we should be more cautious than usual about imposing further risk with no promise of benefit on developing countries, flat refusal to implement ignores the fact that there is a feasible route to ethically acceptable ageing enhancement.

The second option is to press ahead with ageing enhancement at t_1, and to commit to various actions that will make it more likely that we make the right choice later on. Since the concern facing ageing enhancement is a sustained pattern of behaviour, rather than a one-off decision, we need to work on binding ourselves in the future in ways that are external to our agency at the time. Similarly, governments are capable of binding future agreements which, while not impossible to get out of, at least make it more costly to drop prior commitments.

This strategy also gains support from the fact that there is an asymmetry in our ability to acquire new information regarding the respective risks of foregoing and implementing ageing enhancement. If we begin to implement ageing enhancement, we can update our view of how likely we are to engage in sufficient consumption reductions as we go; this leaves us the option of reversing our decision on the basis of better information (although the longer we leave this decision, the more ingrained it becomes in our expectations, and the harder it is to reverse). But if we refuse to engage in ageing enhancement, there is no similar updating of information; since we will not be attempting to engage in reductions in consumption, we will acquire no new information on the likelihood of its success. We will never know whether implementation would have worked, and so we can never 'reverse' our decision to refuse to implement ageing

enhancement. As Goklany (2001: 10) says, we should *ceteris paribus* prefer reversible risks to irremediable ones. This seems to favour ageing enhancement. Still, this strategy may strike some as overly risky because although it commits to trying to avoid bad outcomes, it does not do everything it can in that regard. If we take seriously the idea that a currently unfair distribution of risk and benefits means we should give greater moral weight to risks that affect those who repeatedly do worst in that distribution, this option may strike us as overly optimistic; in a reversal of the previous strategy, it sees a feasible strategy for engaging in ageing enhancement permissibly and considers mere availability sufficient, even with little evidence that we will actually follow such a strategy.

This leads us to a final option, delaying implementation until we have sought more reliable information on the likelihood of achieving sufficient cuts in consumption i.e. a moratorium. This has several advantages: it takes seriously the risk that we will not behave as we should and the idea that this risk contributes undesirably to a broader distribution of risks that is already unfairly skewed towards some. But it does not insist that we must react to this fact by banning further development; rather, it insists that we take seriously an injunction to turn uncertainties into mere risks when ignorance benefits us at potentially great cost to others.

Of course, there is also a significant cost to this strategy. As de Grey (quoted in Volpicelli, 2014) passionately puts it, people are dying "every fucking day" because of ageing. Delaying implementation would cost lives, potentially very many. However, focusing on this set of deaths makes the same mistake as opponents who focus only on deaths and suffering caused by overpopulation, since there are deaths risked by both decisions. Moreover, we have some reason to be optimistic about this strategy. I have been discussing the speculative issue of implementation as though we are currently ready to engage in ageing enhancement, and are only ignorant about its repercussions. But we are only at the stage of research; if we need in any case to engage in scientific research to get to the point of implementing ageing enhancement this argument suggests that we should engage in social research in tandem to gauge the likelihood of consumption cuts being implemented. And since the risk involved in this issue is behavioural, proponents must seize the chance to engage in persuasion that the cost of cutting consumption is worth the gain from ageing enhancement.[98]

Section 8.2 suggested the possibility of a referendum on ageing enhancement and consumption. While I am still doubtful that this would be sufficient to give democratic legitimacy to a decision either way – especially when we consider that any realistic poll would be unlikely to include those in developing countries – it may be that we should engage in such a referendum for epistemic purposes. One reason that we don't currently know whether sufficient cuts in

[98] Depending on how long it takes to research ageing enhancement, it may also turn out that some of the cornucopian possibilities outlined in Chapter 7 (e.g. interplanetary colonisation) become sufficiently likely that we can rely on less significant cuts in consumption; but this is merely hypothetical at the moment.

consumption are feasible is that we do not know whether the majority of people who would have to make such cuts value their current consumption patterns more than they do life extension. As such, referenda may be an important step in reducing our uncertainty to an acceptable level. We should see this as a negative test; i.e. if ageing enhancement *fails* a referendum, then this is extremely good evidence that the requisite public will to engage in consumption reduction is lacking. On the other hand, we should not take the passing of a referendum as sufficient evidence of public will – it is one thing to vote for a measure, another to commit to individual behaviours – but it is a reasonable first step.

8.5 Summary

The distinction between soft and hard limits offers the Overpopulation Objection greater precision. If ageing enhancement threatens soft limits then we ought to change our consumption behaviour before we refuse to extend people's lives, or start restricting reproductive behaviour. Although there are coherent objections to this claim on the basis of fundamental interests, and reasonable preference, I argued that it is ultimately right to focus on reducing consumption for everyone in the first instance.

Still, even if reducing consumption is the right thing to do, it may not happen. I accepted that *if* ageing enhancement will lead to soft limits, *and* we will in fact not adapt our consumption behaviour as needed, then the right course of action may involve foregoing enhancement. However, both of these conditions may not in fact emerge; perhaps ageing enhancement will not even lead to soft limits; if it does, perhaps we will collectively do the right thing and accept cuts in consumption. The Overpopulation Objection thus turns out to be a stance on risk, which says that the right response to risk is to avoid action.

I finished by assessing this kind of response in the light of a broader discussion of risk. I accepted with critics of the precautionary principle that blocking research on the grounds of uncertainty is incoherent; in the light of the Overpopulation Objection turning out to be such a stance, I claimed that it has no argumentative power to block research into ageing enhancement. However, I acknowledged that the stance underlying the objection may have some force, under plausible conditions where the balance of risk and reward from ageing enhancement (at least initially) benefits the wealthy at great cost to the worst off; under these circumstances we cannot transfer reasoning about intrapersonal risk assessment to this decision in any simple way.

The implication is that if we reduce our uncertainty about the effectiveness and popularity of ageing enhancement through research, and find that ageing enhancement will bring about soft limits, but we still face significant uncertainty about whether we will in fact make necessary changes to consumption, then (a significantly weakened version of) the Overpopulation Objection tells us to hold off until we have both reduced that uncertainty, and put in place safeguards to ensure that we will make such changes. This is by no means the strong conclusion that opponents of ageing enhancement support, but it is also not an unequivocal endorsement

of ageing enhancement under any and all conditions. It is true that effective ageing enhancement would improve and save potentially millions of lives. But it is also true that its unintended consequences could severely impact the lives of those who already bear the brunt of many of our decisions. That cannot be ignored, and is the reason why although I have argued we should favour ageing enhancement, we can only favour it under certain conditions.

Conclusion

The motivation for this thesis was to place three significant objections to ageing enhancement in broader philosophical context, and to consider the ageing enhancement in the light of these objections and various potential practical constraints. I clarified each objection, and argued that at best, they may offer some guidance on how we should implement ageing enhancement, but they do not have force as arguments against enhancement *per se*. However, they do suggest that under some plausible circumstances, the pursuit of ageing enhancement would not be right.

I began in Chapter 1 by outlining the Meaning Objection, and explained why it is implausible to think that physical ageing, or acceptance of death at a certain point in life, are necessary components of a meaningful life. This argument rested on a broadly liberal, subjective understanding of meaningful life. Chapter 2 addressed a related concern, that radical ageing enhancement would change our assessments of everyday risks, such that we would refuse to engage in relationships that currently give meaning to our lives. While I accepted to some extent the conservative bias that underlies this worry, I argued that its empirical predictions are implausible, and ignore factors about our psychological motivation to remain connected with loved ones. I concluded that no version of the Meaning Objection provides compelling reasons to avoid ageing enhancement, either as a personal choice or policy target.

In chapters 3-6 I outlined the Egalitarian Objection, and considered various versions of it that rest on different egalitarian principles. Chapter 3 established an important feature of my own account, that we should have distinct egalitarian lifetime and time-relative principles. I defended this claim from two Rawlsian accounts that also lend some support to the Egalitarian Objection.

Having established that we need both lifetime and time-relative principles, Chapter 4 defended a sufficientarian time-relative principle as the only one capable of meeting our concerns with hardship, responsibility and compensation. A sufficientarian time-relative principle is an important component in explaining why egalitarian concerns do not automatically support preferences for young people over old people. Chapter 5 defended a prioritarian lifetime principle, considering and rejecting versions of the Egalitarian Objection that depend on other lifetime egalitarian principles. I argued that an equalitarian lifetime principle is unable to properly capture our concern with people's absolute states, while a sufficientarian principle depends either on an unmotivated appeal to statistical average, or an overly narrow normative view of lifetime sufficiency. I therefore supported an overall egalitarian account that combines prioritarian lifetime concerns with a special concern for sufficiency at particular times.

Chapter 6 considered a view that would have lifetime priority break ties between people who were below time-relative sufficiency, potentially supporting a limited view of the Egalitarian Objection. I argued that we should avoid such tie-breakers in situations where the loser in a competition over resources faces irremediable insufficiency, including death. I justified this by appeal to the idea of rescue. However, I acknowledged some force from the Egalitarian

Objection by suggesting that prioritarian lifetime considerations should play a role in macro-level allocations of resources, and possibly as a weighted criterion in allocating non-emergency interventions; this suggests that if ageing enhancement will mainly benefit the best off in lifetime terms, it should be a lower priority than proponents claim, although I argued that this does not support the original Egalitarian Objection's focus on age *per se*. I also acknowledged that there may be some further constraints on this view from claims of reparative justice; where those who have culpably benefitted from injustice are in competition with those who are the victims of injustice, it may be justifiable to use this fact as a tiebreaker. On some views of systemic injustice, this may support a significant preference towards certain groups; but I also argued that broader egalitarian concerns give *prima facie* support to expanding access to care before making such rationing decisions.

Finally, Chapters 7 and 8 consider the Overpopulation Objection. Chapter 7 outlined the objection and raised some concerns with a predominant response from proponents of ageing enhancement, that we should turn our focus to reproduction. However, I also suggested that similar concerns undermine the objection's conclusion that we should avoid ageing enhancement. Chapter 8 finished by considering an alternative way to address the concerns underlying the Overpopulation Objection: changing our consumption habits. I acknowledged that even if this is the right course of action, there is a risk that we will not do it, and argued that since this risk is unfairly distributed compared with the likely benefits of ageing enhancement, this objection also places some potential constraints on how we should engage in ageing enhancement. However, this most plausible version of the objection still gives no forceful reason to abandon ageing enhancement altogether. It merely suggests that that if there is significant risk of pressure on population and consumption, we should be cautious in ensuring the existence of public willingness to adapt behaviour before applying transformative technologies such as ageing enhancement.

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